A 15614
2

PAPERS

LAID BEFORE

THE LEGISLATIVE COUNCIL

OF CEYLON

DURING

THE SESSION OF 1903.

Opened October 26, 1903—Closed November 15, 1904.

27/3/4

00134736

Colombo:
PRINTED BY G. J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price Rs. 10.

1904.

Digitized with financial assistance from the

Government of Maharashtra

on 26 June, 2018

PAPERS

LAID BEFORE

THE LEGISLATIVE COUNCIL OF CEYLON

DURING

13473 C

THE SESSION OF 1903.

Opened October 26, 1903 — Closed November 15, 1904.

LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1904.

00134736

CONTENTS.

No.	1903.		PAGE
—	PROCEEDINGS ...	—— of the Legislative Council, Session of 1903	v
23	CUSTOMS OVERTIME CHARGES	Papers relating to the Question of Overtime paid to Customs Officers ...	1
24	KADUGANNAWA INCLINE ...	Correspondence relating to the removal of Rocks on the —— ...	17
25	TRADE IN CEYLON ...	Review of the —— for 1902	39
26	APPOINTMENT OF UNOFFICIAL MEMBERS TO THE EXECUTIVE COUNCIL.	Despatches relating to the ——	49
27	SCARCITY OF SILVER IN CEYLON.	Papers relating to the Commissions on the ——	53
28	FINANCIAL AFFAIRS OF CEYLON.	Report on the —— during 1896–1902	63
29	MUNICIPAL COUNCIL OF COLOMBO.	Administration Report of the —— for 1902	87
30	MUNICIPAL COUNCIL OF KANDY.	Administration Report of the —— for 1902	173
31	MUNICIPAL COUNCIL OF GALLE.	Administration Report of the —— for 1902	209
32	WATER SUPPLY TO MANNAR TOWN.	Report and Estimate of the cost of a ——	225
33	GOLD PROSPECTING IN CEYLON.	Report on ——	229
34	PEARL FISHERY ...	Reports on the —— of 1903	235
35	KELANI VALLEY RAILWAY ...	Papers relating to the Cost of Construction of the —— ...	263
36	VILLAGE COMMUNITIES ...	Statement showing the Districts, Presidents, their Salaries and Staffs, and the Number and Nature of the Cases disposed of during 1902 ...	281
37	SUPPLY BILL, 1904 ...	Report of a Sub-Committee upon the ——	289
38	COAL TENDERS FOR 1904 ...	Schedule of Tests of Coal supplied with Tenders for 1904 for the Ceylon Government Railway	299
39	OPIUM BILL ...	Report of a Sub-Committee upon ——	303
40	WASTE LANDS ORDINANCES ...	Returns showing Forest, Chena, Waste, and Unoccupied Lands declared Crown Property during 1902	307
41	FISCALS' FEES ...	Statement of Fees received by the several Fiscals during 1902 ...	335
42	CENTRAL IRRIGATION BOARD	Report of the —— for 1902	339
43	SUPPLEMENTARY SUPPLY BILL, 1903.	Report of a Sub-Committee upon the ——	433
44	CACAO COMMISSION ...	Report of the Commissioners appointed to inquire and report (1) whether since the publication of the Prædial Products Thefts Commission Report in 1895 there has been any material increase in the number of cacao thefts; (2) whether such increase, if any, could have been prevented by the exercise of greater diligence and care on the part of growers, or by more rigid enforcement of the existing law by Government officials; (3) whether the system of rural police has been sufficiently utilized, and whether, when utilized, it afforded adequate and satisfactory means of protecting produce from theft; and (4) whether special legislation is necessary or desirable, and if so what form it should take	437
	1904.		
1	PEARL OYSTER FISHERIES ...	Summary of Report on the —— of the Gulf of Mannar ...	477
2	GOVERNMENT DAIRY ...	Report of the Committee appointed to inquire and report on the Breed, Feeding, and Treatment of the Cows at the Government Dairy Farm, and to make suggestions as to the improvement of the quality of the Milk	485

No.	1904.		PAGE
3	WIDOWS' AND ORPHANS' PENSION FUND.	Statement and Account of the —— for 1903	519
4	PELMADULLA RAILWAY EXTENSION.	Report on the Survey of the proposed extension to Pelmadulla of the Ratnapura Railway	525
5	SALARY OF THE GOVERNOR OF CEYLON.	Despatch respecting the ——	537
6	RATNAPURA RAILWAY ...	Reports on the extension of the Railway to Ratnapura ...	541
7	KELANI VALLEY RAILWAY ...	Completion Report of the ——	583
8	MALARIA AND THE TRAINING OF MEDICAL OFFICERS.	Despatch relating to —— in the Treatment and Prevention of Tropical Diseases	601
9	TRADE IN CEYLON ...	Review of the —— for 1903	619
10	IRRIGATION FUND ...	Statement of Sums apportioned for Expenditure in 1904 ...	627
11	CEYLON AND THE LONDON UNIVERSITY.	Papers relating to ——	631
12	RAILWAY ACCIDENT NEAR BANDARAWELA.	Papers relating to the ——	643
13	PEARL FISHERY OF 1904 ...	Reports on the ——	649
14	HARBOUR TUGS "SAMSON" AND "GOLIATH."	Papers relating to the ——	699
15	TOLLS AND ARRACK RENTS BILL.	Report of a Sub-Committee upon the ——	707
16	INVENTIONS BILL ...	Report of a Sub-Committee upon the ——	711
17	TRADE MARKS BILL ...	Report of a Sub-Committee upon the ——	715
18	REGISTRATION OF DESIGNS BILL.	Report of a Sub-Committee upon the ——	719
19	CACAO THEFTS BILL ...	Report of a Sub-Committee upon the ——	723
20	ADMINISTRATION & MINORS' ESTATES BILL.	Report of a Sub-Committee upon the ——	727
21	WASTE LANDS ORDINANCES...	Returns showing Forest, Chena, Waste, and Unoccupied Lands declared Crown Property during 1903	731
22	LANDS RESUMED BY GOVERNMENT.	Return of —— under Ordinance No. 4 of 1887 during 1903 ...	767
23	PEARL FISHERY OF 1904 ...	Report on the Biological Results of the ——	771
24	MUNICIPAL COUNCIL OF GALLE	Administration Report of the —— for 1903	793

THE

PROCEEDINGS OF THE LEGISLATIVE COUNCIL OF CEYLON.

MONDAY, OCTOBER 26, 1903.

PRESENT:

His Excellency the Right Hon. Sir J. WEST RIDGEWAY, G.C.M.G., K.C.B., K.C.S.I., *President.*

The Hon. Mr. E. F. IM THURN, C.B., C.M.G.
The Hon. Brigadier-General G. L. C. MONEY, C.B., D.S.O., A.D.C.
The Hon. Mr. A. G. LASCELLES, K.C.
The Hon. Mr. F. R. ELLIS, C.M.G.
The Hon. Mr. H. H. CAMERON.
The Hon. Mr. G. M. FOWLER.
The Hon. Mr. S. HAUGHTON.
The Hon. Mr. H. L. CRAWFORD.
The Hon. Mr. H. L. MOYSEY, I.S.O.
The Hon. Mr. W. G. ROCKWOOD, M.D.
The Hon. Mr. S. C. OBEYESEKERE.
The Hon. Mr. S. N. W. HULUGALLE.
The Hon. Mr. F. C. LOOS.
The Hon. Mr. W. M. ABDUL RAHIMAN.
The Hon. Mr. W. H. FIGG.
The Hon. Mr. E. ROSLING.
The Hon. Mr. GILES F. WALKER.

OATHS.

1. The Hon. Brigadier-General G. L. C. Money and the Hon. Mr. Giles F. Walker took their oaths on taking their seats as Members of Council.

OPENING OF THE COUNCIL.

2. His Excellency the Governor opened the Session with the following Address :—

HONOURABLE MEMBERS OF THE LEGISLATIVE COUNCIL,

THIS is the seventh and, I much regret to think, the last Session of this Council that I shall have the honour of opening. For nearly eight years I have had the privilege of presiding over your deliberations, and I have every reason to be grateful for the hearty co-operation which you have always given to me, and the invariable courtesy which has made my duties as President of this Council as pleasant as they have been instructive.

It is my duty, before laying down the reins of Government, to review the history of the Colony during my term of office, and to show how far I have been successful in utilizing the means and opportunities which I have enjoyed, and; in short, to justify my administration of your affairs.

The term of my stewardship has not only been almost unprecedently long, but it has been exceptionally crowded with important changes and events, and consequently any review pretending to fulness must necessarily be lengthy; accordingly, as I shall have the pleasure of presiding over your deliberations a few more times before I leave the Colony, I think that it will be best to defer its submission to you until the eve of my departure. I shall therefore content myself to-day with my usual review of the twelve months which have elapsed since I opened the last Session of this Council. The larger and more comprehensive review of the whole period of my administration will, however, necessarily cover much of the ground which would, on ordinary occasions such as this, come within our purview to-day, and therefore, in order to save repetition, I will only deal with the more salient features of the year, and accordingly it will be unnecessary for me to detain you long this afternoon.

REVENUE AND EXPENDITURE.

It is a great satisfaction to me to be able to tell you that the last year of my administration has been exceptionally prosperous, and that the revenue and anticipated surplus will exceed the record of any year of my administration, including that of the year 1900, hitherto the high-water mark of your prosperity.

The estimated revenue for 1902 was Rs. 26,500,000; the actual revenue exceeded this estimate by Rs. 698,056 and amounted to Rs. 27,198,056, or within Rs. 127,874 of the revenue of 1900. The

surplus revenue for 1902 amounted to Rs. 856,178, notwithstanding a large supplementary vote of Rs. 2,284,797, made up of Rs. 1,969,797 met from current revenue and Rs. 315,000, being half-year's interest on the new loan, from past savings.

The expenditure for 1902 was Rs. 26,341,878, exclusive of expenditure from surplus funds, or Rs. 445,284 more than that of 1901, and Rs. 137,180 in excess of our estimated expenditure for 1902. The principal heads under which the expenditure of 1902 exceeded that of 1901 were Public Debt Rs. 294,373, Miscellaneous Services Rs. 286,857, Railways Rs. 171,822, Irrigation Department Rs. 106,093 Pensions Rs. 93,243, Post Office and Telegraphs Rs. 72,460, and Education Rs. 44,282.

The principal heads under which the estimate of 1902 proved to be excessive were Public Works Extraordinary Rs. 419,051, Public Works Annually Recurrent Rs. 150,427, Forests Rs. 98,148, Hospitals and Dispensaries Rs. 77,468.

The principal items of the supplementary provision were, Railways Rs. 698,186, Miscellaneous Services Rs. 400,230, Charges on account of Public Debt Rs. 316,612, Public Works Extraordinary Rs. 195,109, Military Expenditure Rs. 191,417, Provincial Administration Rs. 91,340, Education Rs. 50,852, and Hospitals and Dispensaries Rs. 49,137.

The estimated revenue of this year was Rs. 27,044,380, or Rs. 153,676 less than the actual revenue of 1902; but I am glad to inform you that the actual revenue of the first nine months of 1903 shows an increase of Rs. 1,940,556 over the corresponding period of 1902, and I shall be disappointed if your surplus this year does not reach 2½ millions of rupees. The increases have been under the following heads: Customs Rs. 186,628, Licenses Rs. 390,181, Railways Rs. 278,164, Interest Rs. 13,707, Sale of Government Property Rs. 872,872, which includes the proceeds of the pearl fishery, amounting to Rs. 827,278. You will notice that even apart from the pearl fishery receipts the revenue for the first nine months of 1903 exceeds the revenue for the corresponding period of last year by Rs. 1,113,278.

The ordinary expenditure for 1903 was estimated at Rs. 26,667,291. It is not possible at present to say whether the estimate will be exceeded. I am glad to inform you, however, that it has been found practicable this year very materially to restrict the amount of supplementary expenditure. The total amount of the items noted for supplementary provision up to the 31st August was only Rs. 769,036·17, as compared with Rs. 1,736,746·36 for the corresponding period of 1902. The latter sum, it is true, included Rs. 630,000 on account of charges on the new loan, but, even allowing for that, the current year's figures show a very satisfactory reduction. Nevertheless, I consider that it should be possible in future to restrict this supplementary expenditure still further. The Supplementary Supply Bill should be strictly confined to items of an unforeseen yet urgent nature. The estimates of expenditure for next year have been framed with this object more directly in view than has perhaps hitherto been the case; that is to say, an endeavour has been made to forecast and provide somewhat more completely the full amount which should be required for departmental expenditure for the year, instead of trusting to the Supplementary Supply Bill of the coming year to make up deficiencies. The estimates for 1904 are in consequence a little larger, but there will be a corresponding decrease in next year's supplementary expenditure.

The revenue for 1904 is estimated at Rs. 28,651,370 and the ordinary expenditure at Rs. 27,970,050. In addition, it is proposed to spend from surplus funds a sum of Rs. 682,780, chiefly on account of railway feeder roads, works on the Kadugannawa incline, &c. The details will be explained when the Estimates are laid before you.

PUBLIC DEBT.

On 1st January, 1903, the debt at the current rate of exchange was Rs. 74,374,642, or Rs. 20,370,789 more than on 1st January, 1902, the increase being due to the new loan which was raised in January, 1902.

The charges on account of interest and sinking fund were on 1st January, 1903, Rs. 3,443,577, and of this amount Rs. 1,832,667 were on account of the portion of the debt incurred for railway Extension. The surplus railway receipts, after defraying this charge, amounted to Rs. 1,235,738. Of the debt of Rs. 74,374,642, 41 millions were on account of railway construction, 25½ millions on account of harbour, and the balance 8 millions for waterworks and irrigation.

COLOMBO HARBOUR.

Of the amount borrowed for harbour extension (25½ millions), Rs. 19,176,937 had been expended up to 30th June last on the new harbour works. The amount required to complete the works definitely sanctioned is about Rs. 2,451,612. The total of the appropriations on account of the harbour is thus Rs. 21,628,550, although the revised estimate in 1902 was Rs. 20,599,468. The excess is principally due to the following items: extension of Graving Dock Rs. 470,974, land acquired for Graving Dock Rs. 180,344, twelve sets of additional moorings Rs. 126,000, Wet Dock Survey Rs. 52,903, additions and improvements to Customs—such as electric cranes, double-span warehouse, fencing, &c.—Rs. 75,297, excess of expenditure on Patent Slip Rs. 100,212, and charges on account of tug "Warren Hastings" Rs. 14,750.

Loans to Local Boards amount to Rs. 936,327, of which Rs. 237,120 have been repaid, leaving a balance of Rs. 699,207.

PRESENT FINANCIAL POSITION.

On the 1st August, 1902 the total cash balance of Government, after raising the loan of £1,400,000, amounted to Rs. 8,486,409; on 1st August, 1903, it was Rs. 3,697,462. This cash balance does not include the currency and note reserve, and cash in the hands of Heads of Departments. Besides the cash balance, Government held on 1st August, 1903, Indian and other securities to the value of Rs. 6,037,206, as against Rs. 5,979,710 on 1st August, 1902. The amount to the credit of the Widows' and Orphans' Pension Fund on 1st August, 1903, was Rs. 3,323,786. The total investments on account of note currency reserve on 1st August, not included in the above total, amounted to Rs. 5,943,280.

TRADE.

The trade of the Colony continues to flourish, the value for the first three quarters of 1903, excluding specie, being estimated at Rs. 161,265,708, the value of exports exceeding the value of imports by Rs. 11,421,896.

The value of the trade of the Colony in 1896 was 1,624 lacs, so that the trade of three quarters of my last year of office is nearly equal to the trade of the whole of my first year.

The value of imports for the first seven months of 1903, specie being deducted, amounts to Rs. 58,796,832, being Rs. 2,039,178 more than in 1902. The value of the exports was Rs. 67,865,621, or Rs. 4,751,095 in excess of last year.

The Customs revenue for the first seven months of 1903 is more than that of 1902 by Rs. 221,787·77, the increase being attributable to larger imports of grain, cotton manufactures, spirits and cordials, and sugar, and also to larger exports of arrack. Harbour dues collected at Colombo amounted to Rs. 679,146·91 being Rs. 568·39 less than in 1902. In port dues collected at outports there is an increase of Rs. 865·16 as compared with last year. The recoveries under the Medical Wants Ordinance amounted to Rs. 86,373·25, as compared with Rs. 90,182·31, a decrease of Rs. 3,809·06, due to a falling off in the export of tea of nearly 5 million pounds.

Turning to imports, cotton manufactures were valued at Rs. 3,679,422, being more than the imports of 1902 by Rs. 380,515. Comparing the value of imports from various countries, it is found that there is an increase of Rs. 271,710 from the United Kingdom, of Rs. 10,371 from British Colonies, and of Rs. 98,434 from foreign countries. There is a decrease in the imports of coal. In 1903 the quantity imported was 364,066 tons, against 385,816 tons in 1902. In kerosine oil the quantity entered for home consumption in 1903 was less than in 1902 by 269,827 gallons. There is an increase in the importation of rice, the duty amounting to Rs. 1,702,333·73 in 1903, being Rs. 37,549·32 more than in 1902. Machinery shows an increase in value of Rs. 252,300, and an increase of Rs. 164,149 is shown in the value of metals.

In spirits the quantity entered for home consumption was 112,286 gallons, against 101,637 gallons, an increase of 10,649 gallons. The quantity of wines imported was less than in 1902 by 345 gallons. Sugar imported shows an increase of 8,170 cwt. in quantity as compared with 1902. The imports of specie increased by 67 per cent. during 1903, the value being Rs. 8,701,800, against Rs. 5,201,327, gold showing an increase of 15 lacs and silver an increase of 20 lacs. In woollens there was an increase in value of Rs. 26,806.

As regards the exports of the Colony, in the first seven months of the current year there were exported 91,263,746 lb. of tea, against 96,231,924 lb. in the corresponding period of 1902, the exports being distributed as follows :—

	1903. lb.	1902. lb.
United Kingdom	63,459,470	68,525.612
British Colonies	14,582,645	14,782,080
Foreign countries	13,221,631	12,924,232
	91,263,746	96,231,924

A feature of the year as regards the tea industry is the increase in the export of green tea, especially to the United States of America. The amounts were 1,303,329 lb. in 1902 and 3,576,682 lb. in 1903, the United States alone taking 487,958 lb. in 1902 and 2,144,204 lb. in the present year.

Of cinchona, the quantity exported fell from 247,173 lb. in 1902 to 123,359 lb. in 1903. Cacao shows an increase in quantity of 7,736 cwt. Plumbago has remained practically stationary compared with last year, but shows a marked advance on 1900 and 1901, the quantity shipped being 304,979 cwt. in 1903, against 319,949 cwt. in 1902, 254,278 cwt. in 1901, and 220,908 in 1900. Cinnamon (plantation and wild) shows an increase of 5,092 cwt.

Of the products of the cocoanut palm there was a very satisfactory increase in the exports of desiccated cocoanuts from 70,516 cwt. in 1902 to 99,487 in 1903 ; arrack from 31,869 gallons to 37,276 gallons ; fibre, yarn, and rope from 125,265 cwt. to 139,675 cwt. More notable still are the advances in export of copperah from 174,209 cwt. to 285,680 cwt. ; oil from 253,652 cwt. to 385,856 cwt. ; poonac from 115,053 cwt. to 171,195 cwt. On the other hand, cocoanuts have decreased from 8,779,961 nuts to 6,639,860 nuts. Considering the products of the cocoanut palm as a whole, there has been a remarkable increase in value as compared with 1902. The value of exports in the seven months January to July, 1902, was Rs. 9,476,268 : for the corresponding period of this year the amount is Rs. 14,274,203.

Cardamoms show an increase in quantity of 809 cwt. ; coffee shows an increase in quantity of 231 cwt. Horns (deer and sambur) fell from 820 cwt. in 1902 to 610 cwt. in 1903, a decrease doubtless due to the legislation of last year, by which the export of cut horns was prohibited for a period of two years.

In the number of packages brought for transhipment there has been a decrease from 220,749 packages to 216,688 packages, but an increase of 761 tons and 95,843 gallons of oil.

SALT.

The year 1903 will, I fear, be memorable as the year in which there was an almost total failure in salt production. It was observed some time ago that the stock of salt in the Island was gradually but regularly decreasing, and efforts were accordingly made to stimulate production, but unfortunately the weather during the last twelve months has been consistently unfavourable to the salt industry, with the inevitable result that the production has been practically *nil*. In order, therefore, to meet the requirements of the Island until the time of the next collection it has been decided to import salt from India, a course which was followed in 1881, and it is anticipated that this can be done without any ultimate material loss to Government. It must not be inferred from this temporary check to your otherwise continued prosperity that this fruitful source of revenue is declining in importance. In my review of the affairs of this Colony during the last eight years I shall show that, on the contrary, the salt revenue is steadily increasing.

HARBOUR ADMINISTRATION AND SHIPPING.

Harbour dues in 1902 amounted to Rs. 1,111,972 and showed a decrease of Rs. 11,456 on the figures for 1901. Harbour dues to 31st August, 1903, amounted to Rs. 780,078, as compared with Rs. 767,402 for the first eight months of 1902, showing an increase of Rs. 12,676.

The tonnage of vessels entering the port still continues to increase. During 1902 2,433 vessels with an aggregate tonnage of 4,574,271 tons visited the port, as against 2,347 vessels with a tonnage of 4,159,145 tons in 1901. During the first eight months of 1903 1,539 vessels with a tonnage of 3,027,281 tons visited the port, as compared with 1,618 vessels, aggregating 2,961,307 tons, during the corresponding period in 1902.

Inclusive of vessels calling to coal, there has been an increase in tonnage, but a small decrease in numbers. Of late years it has been a noticeable feature in the shipping returns of Colombo that the tonnage increases whilst the numbers slightly decrease, showing that large vessels are being steadily substituted for small ones.

As regards sailing vessels, there has been a steady decrease in the last two years, both in numbers and tonnage, but the proportion which they bear to steamers is so small that the decrease is without significance, the tonnage being less than one-fiftieth of the steamships which call at Colombo and Galle.

An additional closed shed in the Wharfage Company's premises has been completed. It is an excellent type of shed, fitted with the electric light, and is of very great service.

The quay wall in front of the grain sheds will shortly be completed, and the question of its further extension is under consideration. Three of the electric cranes have been erected. A charge of 4 cents per lift will cover the total cost of current, and these cranes will be cheaper than hand cranage, and of course far more expeditious.

The extension of the export warehouses along the sea front has been completed.

Good progress has been made in replacing the old Master Attendant's jetty by a new and commodious structure, on which it is proposed to erect two or three electric cranes.

A commencement has been made with the new coaling jetties at Kochchikada, and the necessary cylinders are being sunk.

Two tugs, the "Goliath" and "Samson," have arrived, and have been usefully employed in berthing vessels. It is proposed to levy a small charge for their use, which will, however, be optional. When the new breakwaters and graving dock are completed vessels will find it imperative to use them.

The vexed question of overtime in the Customs Department has, I am glad to say, been at last satisfactorily settled. From the lengthy correspondence on the subject which will be duly laid before you, you will see that the charge for overtime has been reduced from Rs. 6 to Rs. 4 per hour for each vessel, but that those companies who prefer the present system of paying Rs. 6 per hour for any number of vessels are allowed to continue on the old basis. A concession has also been granted in the matter of the hours for which overtime is charged, and the extent to which the Customs officers are allowed to earn overtime fees has been curtailed. I may add that the agreement arrived at received the unqualified approval of the Chamber of Commerce.

PUBLIC WORKS.

In the supply estimates for 1903 Rs. 3,689,390 was voted for Public Works, namely, Rs. 2,052,223 for Public Works Annually Recurrent and Rs. 1,637,167 for Public Works Extraordinary It is expected that the sums voted for the maintenance of public roads, canals, and public buildings will be fully expended this year. Respecting new buildings, roads, bridges, &c., the expenditure for the first seven months was Rs. 586,235, but it is calculated that the expenditure for the remaining months will be larger, and that altogether Rs. 1,385,750 will be disbursed during the year. The expenditure out of loans, &c., was estimated at Rs. 697,705, and it is anticipated that Rs. 565,410 will be actually spent this year.

The following works, among others, have already been completed: Minor Courts and Fiscal's office, Colombo; conversion of the late Grand Hotel, Kandy, into Government offices; King's transhipment warehouse, Colombo; post office, Mannar; post office, Deniyaya; post office and telegraph office, Rakwana; jetty, Hambantota; and the Kadugannawa-Alagalla road; while it is anticipated that the following works will be completed during the year: additions to the Surveyor-General's office; additions to the sisters' quarters, Government hospital, Borella; additions to the Colombo Museum; Nugawela-Ulapane branch road; and the Bandarawela-Ampitiyakanda road.

The following important works have been commenced and satisfactory progress made: Victoria Eye Memorial Institution, Colombo; Technical College, Colombo; administration block, General Hospital, Colombo; medical aid hospital, Dikoya; the quay wall, Colombo harbour; widening of Seashore street, Colombo; Mannar-Talaimannar road; coast road to Puneryn; South Coast road, Eastern Province; Madampe-Hambantota road; Madampe road deviation; Ulapane bridge; and the satinwood bridge, Peradeniya. Progress with the railway feeder roads in the North-Western, North-Central, and Northern Provinces has been considerably retarded in consequence of the scarcity of labour conversant with ordinary stone masonry and breaking stones for the road surface.

The duplication of the Colombo waterworks will be completed this year, and considerable progress has been made with the new reservoir at Elie house, Mutwal. A water supply scheme for Rambukkana has been commenced.

RAILWAY EXTENSION.

Northern Railway.—The work on the Northern railway, which was begun in May, 1900, may now be said to be about two-thirds done. The estimated cost is Rs. 11,029,376; the expenditure, including certain charges connected with feeder roads to stations and a new carriage shed, Colombo, was at the end of July last approximately Rs. 8,171,000.

At the northern end a section, Kankesanturai to Pallai, 35 miles in length, is open for public traffic. At the end of July the rails were laid 24 miles to the south beyond Pallai. At the southern end the rails have reached 49 miles from Kurunegala, the total length of rails laid being 108 miles, so that only 89 miles and 33 chains now remain to be laid. I hope to-morrow to have the satisfaction

of travelling to within four miles of Anuradhapura by the railway, when I shall have an opportunity of appreciating its advantage over the present necessarily slow method of reaching the capital of the North-Central Province.

The progress of the work was much interfered with by the excessive rains of the last north-east monsoon. Labour is now fairly plentiful, but sickness due to the climate, notwithstanding that there are medical officers and apothecaries on the line, is, I regret to say, as prevalent as ever.

Uda Pussellawa Railway.—The estimated cost of this line was Rs. 1,301,351, but this amount will probably be exceeded by Rs. 250,000. The expenditure, including preliminary and other charges, at the end of July was approximately Rs. 1,393,000.

The section Nanu-oya to Nuwara Eliya, 6½ miles, was opened for goods traffic on the 1st August, 1903. I had hoped that it would have been possible to open the line to Nuwara Eliya not only for goods, but also for passenger traffic, many months ago; but there has been an unfortunate series of delays. In the first place, part of the rolling stock was late in arriving, and although the line might, notwithstanding, have been ready by the end of May, it was considered desirable not to start traffic until the effects of the south-west monsoon on the newly finished earthwork had been ascertained. Subsequently it was decided to open the railway first for goods and later on for passengers, a course generally adopted in the case of a new line, and one specially desirable in the circumstances of a hill railway of this kind. The wisdom of the course was somewhat unpleasantly exemplified by the very partial success which attended the trial trips, the frequent curves and reverse curves revealing certain deficiencies in the rolling stock, which at first sight were disconcerting. I am glad to say, however, that the General Manager of the railway has found no serious difficulty in remedying these defects, and in a very short time the line should be in regular and efficient working order.

As regards the remaining portion of the railway, the rails are laid for 10 miles from Nanu-oya, and all other works are now well forward. The enlargement of Nanu-oya station is nearly finished.

Kelani Valley Railway.—At the end of last month I had the pleasure of opening the second and last section of the Kelani Valley Railway, which is thus now finally complete, with the exception of the road bridge over the river at Yatiyantota. The first section of the railway from Colombo to Avisawella has now been open for over a year, and has proved a marked success, the number of passengers especially having far exceeded anticipations. That success will be still further enhanced now that the whole line is open, the tea estates from which the most revenue is expected being in the Yatiyantota district. The prospects of this railway are indeed so bright that there is no reason to doubt that it will yield a considerable profit in spite of the heavy initial cost.

The survey and staking out of the proposed railway from Avisawella to Ratnapura have been completed, and detailed estimates are now awaited. A flying survey from Ratnapura to Pelmadulla for the purpose of framing a rough estimate of the cost of the extension to Pelmadulla has been commenced. The total expenditure on the survey to 31st July, 1903, was Rs. 29,140.

HARBOUR EXTENSION.

The construction of the north-west breakwater had reached a length of 2,000 lineal feet by the end of 1902, and during the first three months of the present year, after which block setting operations ceased owing to the approach of the south-west monsoon, an additional 438 feet were added, making a total length of 2,438 feet, leaving an opening between the end of the work and the head of the south-west breakwater of 1,016 feet. The ultimate width of this entrance has formed the subject of considerable correspondence between the Government, the Harbour Board, and the Consulting Engineers, and it has finally been decided to make the width 800 feet.

The patent slip was completed at the end of last year, and was opened for traffic from the beginning of this year. It has so far proved an unqualified success. The heaviest vessel which it was designed to carry, viz., the "Sir John Coode," has been dealt with without a hitch. The revenue derived up to the 31st July amounted to Rs. 23,988.

In April of this year a commencement was made with the construction of the fishery harbour. The rocks on the foreshore were blasted and removed, a railway line was laid from the quarry at Mutwal, and the conveyance of material to form the mole or breakwater was put in hand. This continued satisfactorily until the end of June, and good progress was made with the removal of the high land intervening between the quarry and the sea, which has been to a large extent levelled to form the required beaching ground for fishing craft, but the heavy seas prevailing during July materially affected the progress in the construction of this breakwater during that month.

In order to obtain the necessary cabook as well as additional rubble necessary for the construction of the various works embodied in the scheme of harbour improvements, such as reclamation of foreshore, coaling grounds, &c., the land comprising Fishers'Hill at Mutwal, occupied by a colony of fisher people, was acquired by the Government, and a commencement with this quarry was made by the Harbour Works Department in the latter end of 1894. A large quantity of valuable material has been obtained in the interim from this source, and the area of the quarry, reduced to a level of about 9 feet above low water ordinary spring tide, is approximately 3¾ acres. The output from 1894 to the end of last July has been 351,385 tons of rock and 418,180 tons of cabook.

The formation of the western arm at the harbour side of the barge repairing basin made fair progress until the setting in of the south-west monsoon, when the pitching of the slope on the harbour side of the arm had to be stopped.

Good progress has been made with the first of the new coaling jetties. As regards jetties Nos. 2, 3, 4, and 5, work has been somewhat retarded owing to special cranes and plant having to be got from England. Two of the new cranes have, however, arrived, and are now at work. As soon as the remainder of the cranes arrive rapid progress may be anticipated. The materials for the first four jetties are nearly all on the site.

Last year I informed you that I proposed to ask the Colony to vote the necessary sum for increasing the length of the graving dock to 700 feet. My proposal was agreed to, and the dock when completed will thus easily accommodate the longest vessels that are ever likely to frequent these waters. In other respects also it compares favourably with similar works in other parts of the Empire, and in about two years' time the Colony should be the possessor of the largest dry dock in the East.

Good progress with the work of construction has been made during the year. The coffer dam has been maintained in good repair, and continues satisfactory. A start has been made with the

excavations for the pumping station, and of the side walls of the dock and the entrance and guide piers inside the coffer dam only 251 feet remain unfounded. The trench excavation for this portion is well in hand.

CRIME.

In most of my opening addresses, Gentlemen, I have had to deplore the prevalence of murders in this Island, and it is therefore with a sense of great thankfulness that I am able on this last occasion to meet you with a record of an improvement in the condition of Ceylon as regards homicides. In other respects also the statistics of 1902 and of the first nine months of this year afford favourable indications that the strenuous efforts to suppress crime have not been unattended with success.

The latest statistics, *i.e.*, those for the first nine months of 1903, show that as regards murders the figures are more favourable than they have been for three years past, and that as regards other cases they are better than 1898, 1900, and 1901.

In 1902 the number of institutions in all Police Courts and Municipal Courts was 23,493, or 252 less than in 1901. The number of true offences cognizable by the police during the year was 17,374, or 316 less than in the previous year.

The number of offences classed as serious crime was 3,559 in 1902, against 3,530 in 1901, an increase of 29 cases. Under murder and homicides, however, there was a marked decrease from 160 in 1901 to 146 in 1902, and under rape and robbery from 36 and 382 cases, respectively, in 1901 to 22 and 326 in 1902. On the other hand, burglary, grievous hurt, and theft of cattle and prædial products show an increase, the number of cases being 1,433, 447, and 1,185, respectively, in 1902, as against 1,384, 441, and 1,127 in 1901. The percentage of false cases of "serious crime" was 37·74 in 1902, as against 35·23 in 1901 and 36·39 in 1900.

Of the 146 cases of murder and homicides in 1902, 121 cases were committed for trial. In 83 cases the accused were convicted, and 40 persons were sentenced to be hanged, of whom 30 were executed. In 30 cases the victims were shot, while in 60 of the cases the knife or some other cutting instrument was used. The murders and homicides were distributed as follows: 7 in Colombo, 43 in the Western Province, 15 in the Central, 7 in the Northern, 35 in the Southern, 5 in the Eastern, 21 in the North-Western, 2 in the North-Central, 5 in the Province of Uva, and 6 in the Province of Sabaragamuwa.

There were 1,433 cases of house-breaking in 1902, as against 1,384 cases in 1901. The small increase took place in the Southern Province. During the second half of 1902 an epidemic of house thefts and house-breakings broke out in the European residential quarters of Colombo, chiefly in Kollupitiya and the Cinnamon Gardens. The house thefts were committed in most cases by boys between the hours of 11 and 4 in the afternoon, while the house-breakings were entirely due to one man, on whose conviction the house-breakings entirely ceased. During the first six months of the current year there were 234 cases, compared with 200 cases during the same period of 1902.

There was a slight increase under the head "Thefts of Cattle and Prædial Products." In 1902 there were 1,185 cases, as against 1,127 in 1901, or an increase of 58 cases. Of the 1,185 cases instituted, convictions were obtained in 316 cases, viz.; 1,097 cases of theft of cattle with 267 convictions, and 88 cases theft of prædial products with 49 convictions. I am glad to say the statistics for the first six months of the current year show a decrease under this head as compared with the same period in 1902.

The power of quartering police under Ordinance No. 15 of 1896 was exercised in only one instance in 1902. In consequence of a disturbance and the wanton destruction of a Catholic church by the villagers it became necessary to station a punitive police force of one sergeant and six constables at Neervali in the Jaffna District. The force was withdrawn in January of this year. In November last year the punitive police quartered at Ambalangoda since 1901 were removed. The quartering of the police in that district had a good effect.

During the current year it became necessary to establish punitive police forces at Kelaniya, Waga, and Padukka in connection with attempts made to derail trains on the Kelani Valley Railway.

The improvement in the disposal by courts of youthful offenders has been maintained; in 1902 27 went to prison as against 45 in 1901. In 1902 the number of cases of corporal punishment inflicted by sentences of the courts was 69, as against 289 in 1901, a decrease of over 75 per cent.

The number of habitual criminals with one and not more than three convictions who returned to prisons in 1901 was 1,023, while in 1902 the number was 1,036. The proportion of recidivists to other prisoners in Ceylon for 1902 was 236 in a thousand; while in England in 1900 it was 612 in a thousand.

An event which has excited some attention in regard to our prisons is the serious outbreak which occurred in June of last year, when 83 prisoners escaped from the Mahara Jail after overpowering and defeating their guards. With four exceptions, all the convicts have been recaptured, and, untoward though the incident was, it served a useful purpose in directing attention to certain defects which have since been, it is hoped, effectually remedied. One of the results of the outbreak was the formation in November of last year of a special police and prisons guard of picked Malays for service at the Mahara Jail. This consists of 2 head overseers, 10 overseers, 6 sub-overseers, and 54 guards. Another of the measures adopted was the transfer to Mahara of the wire entanglement which was such a conspicuous success in the camp for prisoners of war at Ragama.

EDUCATION.

Education in Ceylon during the past year has received more than its usual share of public attention. This has been due to the appointment of a Committee to report on the question of an Educational Cess, in connection with the Committee on the Incidence of Taxation, and to the attention drawn to Ceylon education in the English House of Commons.

Meanwhile the development of the existing system has not been interfered with. Nine new Government vernacular schools have been opened. Most of these are in remote districts, two being in Mannar, where there were formerly no Government schools. Five vernacular schools in important villages have been converted into Anglo-vernacular schools. Thirty grant-in-aid schools have been registered during the year, of which five are English schools.

The opening of the new Government Training College for teachers is a most important step, and there is every indication that its work is of a kind which will be really beneficial to English

education in the Colony. A proposal has been sanctioned for extending this work next year by the appointment of an assistant to the Principal.

The Board of Education has been considering the present system of higher education in the Colony, and on the recommendation of that body Government has entered into communication with the University of London. The Senate of the University expressed its desire to meet the wants of the Colony, and there is reason to hope that arrangements will be made which will render it easier for students in Ceylon to avail themselves of the courses of study and examination prescribed by the University both in arts and in science.

THE TECHNICAL COLLEGE.

During the year 1903 the Technical College has grown in respect of the numbers of its students and has developed its functions. No new departments have been opened, but the organization in some of the existing departments has undergone some changes, with the effect of increasing the student roll in some and diminishing the numbers in others. In the department of drawing, which was the latest of the departments to be opened, the numbers attending have increased from 78 in 1902 to 118. There has been an increase in attendance at all the regular drawing classes; but notably in the teachers' training class, where the numbers have increased from 29 to 43. A special feature of the year in connection with that department was the opening of a class for teachers of mathematics to be trained in practical geometry. As many as thirty-two teachers in Colombo colleges and schools attended that special class.

In the departments of civil engineering and of mechanical engineering and surveying and levelling, where the courses run for two years and upwards, there are no changes to record. In the department of telegraphy the numbers in training are now less, not for want of candidates for admission to the college, nor for want of vacancies to be filled in the Government service, but because of a more strict system of selection of candidates for admission to the college and a higher standard for the entrance examinations. This stricter system has become necessary by reason of an important change introduced in the length of the training in that department. The students are now in training for one year instead of two years. The college has to turn out the same number of trained recruits every two years as hitherto, but only half the number of students need be trained each year. The college has to call for better student material in order to train it in half the time.

A distinctly new departure was made at the beginning of the year by opening evening classes in some of the departments of the college. About 47 are now attending those classes, the majority studying telegraphy and electricity and magnetism. Since February a small party of soldiers—telegraph operators of the Royal West Kent Regiment—have attended daily for training in telegraphy.

A regulation came into force early in the year that every male college student must attend drill daily, except those who are enrolled as volunteers. About sixty are volunteers, and some thirty-nine others are drilled every day. Fifty-six volunteers from the college went to camp at Diyatalawa under command of Lieutenant Cockerill, the chief instructor of telegraphy and electrical engineering.

The new buildings for the college are making satisfactory progress, and a portion of one block of the buildings sanctioned is likely to be completed early next year. In the meantime the work of the college has to be conducted in temporary buildings, pending the completion of its permanent quarters.

The total number of students now on the roll of the college is 254, an increase of 66 for the year.

SURVEYS.

Survey operations during the current year have been more diversified than previously, and, if more interesting in consequence, have also been more difficult to control and work economically. This was more particularly felt in the Sabaragamuwa and North-Western Provinces, where the Block Surveys were suspended in June to meet demands for preliminary plans in the North-Central Province and Uva. Had it not been for the cessation of these surveys, this would in all probability be the record year for the Block Survey, which since the 1st January last has covered 160,000 acres, and which will, it is estimated, cover over 200,000 acres.

The Block Surveys in the Southern Province will alone aggregate 120,000 acres. In the North-Central Province the outturn will, it is hoped, be somewhere between 40 and 50 thousand acres, as it is here that surveys are urgently required for purposes both of sale and of settlement. In the Uva, Sabaragamuwa, North-Western, and Northern Provinces the areas will be smaller, but they are of importance, as they were selected either for purposes of settlement or in connection with large irrigation works under which there is demand for land.

Very fair progress was made with the issue of Block Survey preliminary plans for settlement purposes, 108 villages being dealt with, representing a total area of 94,013 acres. Title plans to the number of 285 sets were issued to Government Agents. Progress in the studio was good, considering the accommodation, and next year, when the new studio which has recently been erected is in full working order, the reproduction of plans and maps by photography will be greatly facilitated and the outturn correspondingly largely increased.

Application Surveys have received considerable attention, the outturn being well maintained. During the first six months of this year the number of applications for surveys for which fees had been deposited was 1,397. In the corresponding period of 1902 the number received was 908, showing an increase this year of over 50 per cent.

The total number of questions in the Application Branch in all stages of attention at the end of June was as follows: applications for which fees had been deposited 2,786, Crown requisitions 669, total 3,455. The great increase in the number of fees paid applications comes mainly from the Southern and North-Central Provinces, where the excess over the first half of 1902 is 150 per cent. and 100 per cent. respectively. There is also a large proportionate increase in Uva and Sabaragamuwa, which, however, does not greatly affect the total for the Island. The average staff employed on this class of surveys during the current year has been thirty-six surveyors.

The particular feature of the year's work is undoubtedly the strenuous effort which has been made by the Topographical Survey to meet the requirements for a good 8-mile-to-the-inch map. This necessitated three separate surveys. Two parties continued the 1-inch survey of outlying districts, such as the strip between the mountain zone and the Mahaweli-ganga, portions of the south-west of the

North-Central Province and Puttalam District, as well as the north of the Jaffna peninsula and islands, including Mannar. Another party was scattered all over the west and south of the Island to fill in gaps in former surveys, and a third was engaged hill sketching in the mountain zone. This last survey fell on the superintendent and assistant superintendents, who, with the assistance of a few surveyors, have made an excellent hill sketch map of the hill country from Matale North to the Southern Province. The parties on the 1-mile survey have completed 1,500 square miles.

A class of surveys which have not been sufficiently noticed hitherto are Irrigation Surveys, *i.e.*, the survey of lands for sale under irrigation works. This necessarily includes levelling most of the survey lines, so that no lot may be sold as irrigable which cannot be reached by water from the main channels. In the North-Central Province considerable areas are being surveyed, plans for over 700 acres under Minneri tank having recently been received, and other surveys are in progress at Maha Illuppalama, so that at least 2,000 acres should be completed this year. A thousand acres at Minneri is being surveyed on the application of a Sinhalese lady, which tends to show that this country will be rapidly developed as soon as the Northern line is opened as far as Anuradhapura.

In the north of the mainland of the Northern Province large surveys are in progress under the Karachchi scheme, and also under the Giant's tank in the Mannar District, covering over 20,000 acres. These are included with the Block Surveys, as they, properly speaking, belong to that class of work. At Karachchi there is one application alone for 3,000 acres near Parantan railway station. In the Eastern Province 500 acres have been cut up at Katankuddiyiruppu and 6,000 more in 10-acre lots under Vakaneri, with an additional thousand connected with the Purani anicut, and another 2,000 acres are being surveyed under the Kunumunkutta anicut. This makes about 10,000 acres of extra paddy land in the Eastern Province, exclusive of the entirely new country which will be opened out in the Northern and North-Central Provinces.

Trigonometrical Surveys during the year have been more or less confined to breaking down some of the large figures and checking old work, although some observations were taken for the completion of the north-west scheme.

A very important innovation this year is the formation of a recess camp at Diyatalawa, where half the topographical party are now accommodated. It is anticipated that the change from the malarious districts of the low-country to what is undoubtedly the finest climate in Ceylon will prove very beneficial, and that both officers and surveyors will resume field work next season with renewed vigour after the bracing they will receive during recess. I may also mention that Diyatalawa is peculiarly well suited for training surveyors for contour surveys, and that a class of selected men will be there trained by the superintendent.

In conclusion, I should like to say a few words in connection with the new 8-mile map, which will no doubt excite much interest and perhaps some criticism. In the first place, it must be remembered that such a map is not compiled for one particular section of the community. It is a general map, which is intended to meet the wants of Government, of the general public in the Island and out of it, and also, as far as such a scale admits, the requirements of the military. On it is shown the mountain zone generally, rivers and streams with their affluents of a certain length, keeping the scale constantly in view, railways, main roads, and important minor roads, resthouses, post and telegraph offices, and in the less crowded parts of the Island the pinpáras or roads between villages. Then, again, the names of places had to be carefully considered. First of all, each district was gone over with the Census book, and the most important villages were selected according to the number of inhabitants; these were inserted on a preliminary 8-mile map, which was checked by the Surveyor-General, and many names struck out for various reasons; for instance, it is obvious that a village of, say, twenty inhabitants at the junction of a road is of more importance to the general public than one of a hundred entirely off the road.

Then, again, both as regards features and names, the map had to be properly "weighted," both to avoid confusion and to indicate at a glance the more populous parts of the Island. The work in itself is accurate, having been reduced by photography from much larger scale surveys. As much information has been given as is possible without destroying both the utility and the appearance of the map, and it is doubtful whether, even after the whole survey of the Island is complete, more generally useful information could be inserted on a map of the same scale, although, as time progresses, the relative importance of places will doubtless change and necessitate further editions.

Land Settlement.

One of the most important events of the year has been the constitution in June last of a Land Settlement Department to take the place of the Waste Lands Department, and the removal of the office from Galle to Colombo. As the work of settlement proceeded it was found that much was to be gained by having the claims to all the land in remote villages—irrespective of its nature—decided by one officer, instead of dividing the work, as hitherto, between the Revenue Officers and the Settlement Officer. It was therefore decided to create a Land Settlement Department, which should deal with both cultivated and uncultivated lands in villages difficult of access, and in which the majority of the land was waste. The direct control of the new department has been entrusted to Mr. J. G. Fraser, who has since August, 1901, filled the post of Special Officer under the Waste Lands Ordinance, but a general supervision is exercised by Mr. Ellis, who has undertaken the work in addition to his own duties, and whose ripe experience is invaluable.

To admit of work being taken up in the North-Central Province, where extensive areas have been surveyed and are awaiting settlement, Mr. H. O. Fox has been appointed Special Officer and Assistant Settlement Officer, and an efficient clerical staff has been provided. Additional assistance may be required as the work progresses, as it is desirable that the settling of claims, when once decided upon, should, in the interests of all parties, be pushed on as rapidly as possible. With the larger staff now available and the improvements effected in the Survey Department, whereby the outturn of plans has been materially expedited, the process of settlement is already becoming far more rapid, and it is hoped that it will be complete in a few years, when this item of your expenditure should admit of very material reduction, if not extinction.

During the first seven months of the present year the operations of the Settlement Officer have been confined to the Southern Province and the Province of Uva. The satisfactory advance made last year has been maintained, and as several of the principal influences retarding progress have been removed, still better results are anticipated in the future.

The chief causes of delay outside of the department have hitherto been : (*a*) the slow outturn of Block Survey plans and (*b*) the incapacity of the Government Printer to print more than twelve or fifteen notices a week, owing to six publications of each notice in the *Government Gazette* being required. Both these difficulties have now been overcome—the latter by the amendment of the law by reducing the number of publications from six issues to one, the former by improved methods in the Surveyor-General's office.

One of the greatest difficulties encountered by the Settlement Officer hitherto has been the number of centres in each district from which he has had to work and the large number of circuits he has had to make. The survey parties are now being concentrated, so as to deal with large numbers of contiguous villages, and this will no doubt greatly facilitate settlement operations.

The only litigation so far found necessary this year has been in the Matara and Hambantota Districts.

The number of notices prepared this year has been 270, and no fewer than 264, embracing 36,607 acres, have been published, whilst the number of final orders published has been 403.

In the Galle District the Block Survey plans so far received refer to the Hinidun pattu. Two villages have been noticed and partly settled. The completion of these villages will be taken up shortly, when the lands appearing in the other plans furnished this year are dealt with. The other settlements effected have been on preliminary plans. During the period January-July, 1903, over 1,000 acres of land in the district were finally settled.

Operations in the Matara District have been carried on, chiefly on Block Survey plans, in the Morawak korale and the Gangaboda and Kandaboda pattus; but some isolated claims in the Weligam korale and the Weallboda pattu, surveyed on preliminary plans, have also been disposed of. In the Morawak korale fifty-three villages, or practically the whole korale, have been surveyed. Plans for fifty-one of these have been received, and thirty-six villages have been completely settled, and, save for the four plans received this year, the remainder are far advanced. Plans of eighteen villages situated in the Gangaboda pattu have been received this year. The notices for all of these are now appearing. The village of Kehelwala, the plan of which came to hand last year, has been completed. In the Kandaboda pattu the plans of nineteen villages have been furnished to the Special Officer. Fifteen notices for ten of these have been prepared, and the remainder will be taken in hand shortly.

During the first seven months of the year nearly 18,000 acres were finally settled, about 17,000 acres being declared to be the property of the Crown after due notice and inquiry. Nine reference cases, affecting an area of 526 acres 2 roods and 21 perches, were decided in favour of the Crown, and in none of these cases was an appeal lodged. In one case judgment went against the Crown, and an appeal will be taken. The area involved is, however, only 2 acres 1 rood and 28 perches.

Good progress has been made in dealing with the Block Survey plans of the Hambantota District, especially of those lying between the Walawe river and the town of Hambantota, notices for eight villages having been published.

The progress made in Uva has been very encouraging, and the provisions of the Ordinance have now been applied to no fewer than fifty-three villages, chiefly in the Wellawaya and Udukinda divisions. 3,593 acres have been settled, and the people in this Province appear to have recognized the advantages the Ordinance confers, their attitude being all that could be desired.

In the North-Central Province the work has been hitherto carried on by the Government Agent alone. An area of 10,600 acres has been noticed under the Ordinance, and at the end of July 2,250 acres had been disposed of. Operations on an extensive scale are about to be inaugurated by the Special Officer.

THE ROYAL BOTANIC GARDENS.

During a large part of the year the Director was absent on leave, and his duties were efficiently carried on by Mr. Carruthers. During his absence the Director spent several months visiting the United States and the West Indies to study the organization and working of other botanical institutions, agricultural colleges, experiment stations, &c., and to collect ideas, suggestions, &c., for the successful working of the Ceylon department.

The work of the last year has largely consisted in the consolidation and detailed organization of the expanded department, more especially in regard to the new Experiment Station at Gangaruwa, the new garden at Nuwara Eliya, and the horticultural side of the work at Peradeniya, which now has room to expand by the transfer of the agricultural plots across the river. The Experiment Station is being steadily brought into working order with the aid of the Committee on Agricultural Experiments, and has already proved of much interest and value to the planting community. When first taken over it was chiefly planted with cacao, amongst which was a vast number of other trees, especially cocoanuts, arecanuts, and shade trees; the number of trees of all kinds averaged over 500 per acre, and the estate was far too crowded for anything to succeed, while the cacao canker was rampant, over 96 per cent. of the trees being diseased. The first thing to be done was obviously to get rid of the canker and the excessive shade. Thousands of trees have been cut out, and the canker has been regularly excised according to the methods recommended by the Government Mycologist. The first rounds of the coolies detailed for excision work were protracted and costly, but now the canker has been largely got under, and the result of the work is already evident in increased crops. The whole history forms an instructive object lesson. At its best, in 1897, the cacao crop, then just beginning to be attacked by the canker, was at the rate of almost 3 cwt. per acre; by 1901 it had fallen to $\frac{3}{4}$ cwt. per acre. That cacao in the Island generally has not similarly suffered, is largely due to the work of the Mycologist. A large area has been cleared and planted with plots of various products for experiments on yield, manuring, different methods of treatment, &c. Among the products now under observation are tea, cocoanuts, rubbers, castor oil, several fibres, cardamoms, groundnuts, &c. A commencement has been made in terracing part of the sloping land to ascertain the cost of such work and the resulting improvement, for it seems probable that in the long run Ceylon cannot stand the constant washing away of soil that is now going on in the hills, and will have to adopt terracing, like other countries with heavy rainfalls. A series of experiments is also in progress to determine the value of different leguminous plants as nitrogen collectors for soil improvement.

The former agricultural plots in the Peradeniya Botanic Gardens are now mainly devoted to horticulture, especially to an extensive collection of vegetables which is being made, including

all kinds known to be locally cultivated up to moderate elevations, and all possible kinds of foreign vegetables that will grow here. When reliable tests have been made and a sufficient stock propagated these will be largely distributed through the school gardens and in other ways, and by sale to the public, in the hope of bettering the quality and quantity of vegetables now grown in the Island. Another large area of experimental plots is used by the Scientific Assistant, Mr. Lock, who is carrying on extensive experiments in the possibility of breeding improved local varieties of vegetables, &c., a line of work hitherto little touched upon in the tropics, and both uncertain and tedious, but to which the wonderful progress of European horticulture is largely due.

The new experimental garden in Nuwara Eliya, occupying 10 acres in a corner of the new park, has already yielded interesting results. The object in view in opening it was largely to see what could be done with the sour swampy soil of the high-level uplands, and to improve the appearance of this unsightly part of the town, as well as to introduce and try ornamental and useful plants suitable to these soils and elevations. Analyses of the soils have been made by the Government Chemist, and recommendations for treatment followed out which have already caused a remarkable improvement. Many plots of grasses have been tried, and several kinds of exotic fodder grasses have been found to yield good crops on the prepared land, and maintain their hold against the inferior native grasses. A large number of useful fruits, ornamental plants, trees, &c., have also given good results, and much information of value to local horticulturists has already been acquired.

Another series of experiments, to occupy a few years, has just been commenced in the dry country now being opened up by the new railway and irrigation works. It is of great moment to know what prospects this region offers for other cultivations than rice—cultivations which may bring traffic to the railway, and perhaps an export trade to the Island. Rice, cocoanuts, palmirah palms, gingely, and Jaffna tobacco may be pretty safely left to private enterprise to introduce in suitable spots. But in view of the fact that cotton, which is one of the largest staples in the very similar country of the Madras presidency, is rising in price, while great efforts are being made by the British Cotton-growing Association to encourage the growth of cotton within the Empire, it seems particularly desirable to try what can be done with this product in the dry region. An area of about 80 acres is being reserved for cotton under the new tank at Maha Illuppalama, about 20 miles south of Anuradhapura, and a thorough trial will be given to large plots of Tinnevelli, Egyptian, and American cottons, with and without irrigation. The experiment will be made three-cornered by adding fodder and stock, the latter to supply manure for the cotton, while at the same time they may be partly fed on the cotton seed for the Colombo market. Plots of rubber and cacao under irrigation are also to be tried, the experience of the Anuradhapura Botanic Garden making it seem probable that they will do well under regular irrigation. The general object aimed at in this experiment with cotton is to see whether it is possible to get a yield better in quality and quantity than that obtained in South India, which leaves an excessively small margin of profit. Besides the Government experiment, it is intended to grant favourable terms to capitalists intending to experiment with the industry, and also to encourage cotton growing among the villagers by grants of good seed on credit, and by purchase of the crop for a few years, until the possibilities of the industry securing a hold in Ceylon have been thoroughly tested.

The work of the Entomologist and Mycologist has continued to be of much benefit to the planting community, and the desirability and advantage of such work is being more and more generally admitted. The fumigatorium at Kochchikada has been completed, and in future plants, fruits, &c., liable to introduce dangerous insects will be dealt with there. Circulars have been issued dealing with various pests attacking tea and other crops. Much discussion has been aroused over the proposals made by the Entomologist for legislation against the spread of shot-hole borer—probably the most troublesome insect pest at present affecting tea—many people imagining that the very simple proposals made, that all infected estates should be registered with the Entomologist, and that no estate not certified by him as free from the pest be allowed to sell tea plants, were the thin end of the wedge for much more drastic measures on the part of Government or extensive interference in planting matters and methods. Opposition, however, appears to be steadily decreasing. Legislation in such matters must largely follow and crystallize public opinion, but the sooner cultivators recognize that plant diseases are as insidious and infectious as those of animals, and that it is their duty to keep their cultivations as free from them as possible, the better for agriculture in Ceylon.

The staple products of the Island continue in good condition, and realize fair prices: the price of tea in particular shows a distinct improvement. The export of cacao for the past year was the largest yet recorded, but the price has been lower, chiefly owing to the increasing proportion of the darker-coloured Forastero beans. Cardamoms, as was predicted some years ago, show signs of suffering from over-production, large areas having been planted here and in Southern India.

Among new and minor products, rubber deserves first mention. This is now an established and rapidly expanding industry, and probably not less than 11,000 acres are now devoted to it. A considerable export has already occurred, and, thanks to the care taken in the preparation of the milk, the prices obtained are much higher than those of the best native Para rubber, which has hitherto topped the market; further, there is but little "scrap," so that the bulk of the export has sold at a price of about 4*s.* a pound. The cautious estimate published by the department in 1898 has been considerably exceeded on several estates, both as regards quantity and price. The investigations into the Ceylon guttaperchas, mentioned in my address to this Council at the opening of the 1901 session, have been completed with the aid of the re-organized Imperial Institute, but, I regret to say, with somewhat disappointing results, it being found that these products, which can be obtained in considerable quantity in our forest, have so small a market value at present that it will not pay to collect them.

Investigations have been continued with citronella oil, an industry which is in a depressed state from over-production, adulteration, and the competition of the pure Java oil. A plot of the grass has been planted at 2,000 feet elevation on the Experiment Station, and is doing well, thus showing that there is much land in the Central Province suited for the industry and now lying waste under mana grass. Experiments in distillation are now being tried, and there seems reason to suppose that Ceylon may once more be able to turn out an oil which may compete with that of Java in purity and price.

Camphor has been planted in a large number of places; and the present year should see a small export of this product, but it is too early yet to say whether it is likely to become established as a minor industry in the Colony.

Ceylon coca continues to figure in the London drug markets as obtaining about the highest prices. The demand for this leaf is of course very small, and any considerable increase of production would lower the prices considerably.

Pepper, in former days a staple product, continues to be planted in small quantity, and Ceylon pepper has realized good prices in London.

Among more specially native products which continue to expand may be mentioned cassava and vegetables for the markets of the larger towns.

Medical Department.

The most noteworthy event of the year in connection with the Medical Department was the laying of the foundation stone in August last of the new Eye Hospital which is to perpetuate the memory of Queen Victoria. It is a great pleasure to me that the closing year of my administration has seen the beginning of so beneficial a work, which is destined to be the means of saving the eyesight of many in this Colony.

No new hospitals nor permanent dispensaries have been opened since the beginning of the year, but the old hospital at Mulhalkele, which had been closed in December, 1902, was opened in June of this year for the fever season, and two itinerating stations (branch dispensaries) have been established in the Province of Uva.

The following new works are under construction: Administration block, General Hospital; new hospital, Dikoya; dispensaries at Chavakachcheri, Ambalantota, and Bandarawela; medical officer's and dispenser's quarters, Anuradhapura; temporary ward, Rakwana; religious sisters' quarters, General Hospital; improvements to the Medical College, Colombo; new buildings, Uda Pussellawa hospital; outdoor dispensary, Kandy; alterations to the Galle hospital; improvements, Tangalla hospital; and a dispensary at Elpitiya, which is being built by public subscription.

General Health.

During the year a small outbreak of cholera occurred at Pallekele estate, Kandy; there were fifteen cases with eleven deaths. There was one case of cholera at Ragama. A fatal case of diphtheria happened at Dikoya; one case of smallpox was introduced into Kandy by a passenger from the harbour, but no subsequent cases developed. There were five cases of smallpox with two deaths on Bon Accord estate, Bogawantalawa, one fatal case on Battalgala, and one case at Angampitiya.

One case of imported plague was received at the Plague Hospital, Galle, and the patient satisfactorily recovered.

Colombo Drainage Scheme.

In view of the commencement of the Colombo drainage works, it may be of interest if I detain you for a few moments with a brief account of what has been done. The scheme which is being carried out is based, I may remind you, on the report of Messrs. Mansergh & Sons, dated 1st November, 1899, as to the works necessary for taking the sewage of Colombo out of the harbour. This scheme was to be self-contained and efficient by itself, and to be capable of being merged eventually into a larger scheme for dealing with the drainage from the whole of the Municipality. It consisted of a system of sewers and rain water drains in all the streets draining towards the harbour, a pumping station at the junction of Pickering's road and Korteboam street, an outfall sewer from there to Modara, and treatment works discharging into the mouth of the Kelani. These works were estimated to cost Rs. 2,605,000.

In 1902, on account of the project which had been placed before Government for the construction of a large wet dock in Blomendhal, with a deep entrance channel from the harbour near Mutwal, it became necessary to examine in what manner the drainage scheme could be modified to admit of the wet dock being constructed without cutting through the outfall sewer. It was therefore one of the first duties of the Resident Engineer, who was appointed in September, 1902, and who arrived in Colombo on 9th November, to examine and report on this new feature in the scheme.

Surveys were commenced and trial borings put down immediately, and reports accompanied by plans, sections, and the results of the borings were forwarded to Messrs. Mansergh & Sons. The information obtained showed that a satisfactory solution of the difficulty was quite feasible. The crossing of the wet dock entrance channel is avoided. While leaving the ground free for the dock to be constructed or not, the revised scheme is equally efficacious in either case.

The most important features of the drainage scheme have thus now been entirely revised. In doing so it has been necessary to take into account many other projected schemes which might be carried out in the future for the improvement of the river, the lake, and the city in general, and to provide for their construction in cases where they might affect the designs for the drainage works.

While the revision of the scheme has been proceeding, a commencement has been made in the preparations for the constructive work upon the street sewers.

Post and Telegraphs.

The business of the Post and Telegraph Department has continued to advance. The total number of articles which passed through the post in 1902 was in round numbers 23,350,000, an increase of 1,950,000, or 9 per cent. The weight of mails to the United Kingdom rose 8 per cent. in the year, and foreign parcels rose 10 per cent. Indo-Ceylon parcels alone showed an increase of 17 per cent., but there was a fall in inland parcels, which reduced the total advance to 1 per cent. The amount collected for senders of value-payable parcels was Rs. 633,372, against Rs. 505,554 in the previous year, and the Customs duty amounted to nearly Rs. 67,000, being Rs. 2,000 more than in 1901. In my last address I stated that there was in 1901 a drop of 1 per cent. in the value of money orders. In 1902 there was an increase of 5 per cent. in value and 8 per cent. in number. There was marked improvement in the Post Office savings bank. The number of depositors rose from 54,426 to 57,007, and the amount to their credit from Rs. 1,315,469 to Rs. 1,454,858, while Rs. 122,380 was added to the invested funds. At the same time the average balance has remained for ten years at the low figure of Rs. 25, showing that the bank is, as it should be, used by people of slender means.

The revenue of the Post and Telegraph Department in 1902 was Rs. 1,050,000, an increase of only Rs. 10,500 on the receipts of 1901. The expenditure was Rs. 1,125,000, against Rs. 1,053,000 in 1901. Special expenditure amounted to Rs. 43,000, and the nominal deficit of Rs. 75,000 is more than covered by the services rendered free to public departments, valued at Rs. 258,000.

The Telegraph branch showed an excess of cash revenue over expenditure of Rs. 192,000, against Rs. 215,000 in the previous year, the difference being due to the fact that the department is no longer paid for maintaining the railway telegraph system.

The work done by the Telegraph branch includes the completion of the telephone system of Colombo on the metallic return circuits; the extension of the Tyer's tablet system to Ragama and Panadure; the completion of an additional railway wire between Colombo and Galle; the construction of the railway telegraph line from Avisawella to Yatiyantota on iron posts and the transfer of the postal line to them; and the new railway line from Nanu-oya to Nuwara Eliya. Postal-telegraph offices have been opened at Neboda, Weligama, and Dehiowita, the extension from Lunugala to Madulsima has been completed, and the telegraph office at Madulsima opened; the extension from Rakwana to Deniyaya has been commenced: the erecting of the posts on the railway line between Kurunegala and Anuradhapura to carry postal as well as railway wires has made considerable progress, and the railway telegraph line to Ragalla is complete. Railway telegraph offices have been opened at Dehiowita, Karawanella, Yatiyantota, and Nuwara Eliya.

Owing probably to the completion of the new Pacific cable, the Eastern Extension Telegraph Company made a reduction this year in their charges between India and Australia of nearly 50 per cent, and the rates are now Re. 1·95, or 2*s.* 7*d.*, a word instead of Rs. 3·62, or 4*s.* 10*d.*, formerly charged.

The international postal improvements include the establishment of a direct insurance system for parcels with Mauritius, a material reduction of money order commission on value-payable parcels between India and Ceylon, and the introduction of acknowledgments for insured parcels between Ceylon and the United Kingdom.

Steps are being taken to effect improvements in the telephone system in Colombo.

FORESTS.

The administration of the Forest Department during the past year was unmarked by exceptional features. Mr. H. F. C. Fyers held temporary charge during the latter half of 1902, and satisfactorily supervised the working of the department. At the beginning of the current year the services of Mr. J. L. Pigot of the Indian Forest Service were obtained on loan from the Government of India for a period of eighteen months.

The gross forest revenue for 1902, inclusive of the value of timber granted free of charge for works of public utility and of timber growing on lands sold by Government, amounted to Rs. 411,046, while the total charges were Rs. 268,594. The surplus was thus Rs. 142,452, as compared with Rs. 159,074 in the preceding year.

For the first half of the current year the revenue, excluding the value of free grants and of timber on lands sold, amounted to Rs. 154,367, while the charges were Rs. 100,814, giving a surplus for the half-year of Rs. 53,553, as compared with Rs. 46,427 for the corresponding period of 1902. The revenue estimate for the current year is Rs. 391,952, or about Rs. 19,000 less than the actuals of 1902. There is reason to think that this estimate will be exceeded; while, on the side of disbursements, special attention has latterly been paid to the lessening of capital expenditure not required to produce revenue, and to the lowering of cost rates for the transport of forest produce. It is therefore expected that the proportion of nett to gross receipts will be higher in 1904 than in recent years.

The total area of reserved forest in the Colony was reported at the close of 1902 to be 439,632 acres, of which area 161,756 acres were added during that year. The reported extent of proposed reserves is some 814,000 acres; but final selections have not yet been made for the greater part of this area. Partly for this reason the expenditure on forest demarcation has latterly been considerably curtailed.

Sales of timber at the central depôt in Colombo have recently been satisfactory, after a period of depression in 1902. Fresh arrangements for the classification and sale of ebony and other timbers have latterly been made, and timber not suitable for the export trade can now usually be purchased at any time. In 1902 the depôt sales realized Rs. 124,549, or Rs. 4,742 less than in the previous year. During the first six months of the current year the realizations were Rs. 48,873, or Rs. 7,601 more than the corresponding figure for 1902.

The opening of the Northern railway will certainly greatly facilitate the exploitation of forests which have hitherto been relatively inaccessible. The lessening of transport charges will, it is hoped, enable timber of various kinds to be more easily and more cheaply laid down in Colombo and other local markets. It is anticipated that another effect will be the revival on a considerable scale of the old timber export trade to India from Jaffna and other ports. Mr. A. Clark, Assistant Conservator, has been deputed to select for reservation forests in the vicinity of the railway in the North-Western, North-Central, and Northern Provinces.

The work of enumerating timber trees growing on the beds of tanks under restoration in the North-Central Province was entrusted to Captain A. M. Walker, late of the Forest Department.

Efforts were made during 1902 to sell standing in the forests large quantities of timber, but without much success. Sales of this kind will be encouraged, and will, it may be hoped, in time increase. Meanwhile the bulk of the timber must be removed on Government account.

Less expenditure was incurred during 1902 and in the current year on plantations, attention having been directed rather to improving existing forests by sylvicultural operations, which are far less costly.

The headquarters of the department were transferred on 1st June, 1903, from Colombo to Kandy, whence the principal forests can be more readily reached and the administration more efficiently conducted.

Forest administration during the past year followed generally on the lines of the re-organization of 1899. Further experience has shown that it may prove desirable to amend in certain directions the principles and practical methods governing the management of Crown forests. This question is now under the consideration of Government.

THE RAILWAY DEPARTMENT.

The result of the year's working of the Railway Department has been satisfactory, both financially and otherwise. The gross revenue up to the end of June showed an increase of Rs. 225,363 over the corresponding period in 1902, the principal increases being in tea, rice, cocoanut produce, and manure. There was also an increased tonnage in railway material for extensions and in railway material for existing lines. The increase is a general one throughout the different descriptions of traffic conveyed, the few decreases being slight, with the exception of timber and breakwater material, the latter of which shows a falling off of no less than 8,963 tons, due to the Chief Resident Engineer of the Harbour Works requiring less stone from the Mahara quarry.

The principal event which has occurred this year, and one that has undoubtedly affected the traffic, is the undertaking of extensive works for the better preservation of the Kadugannawa incline. From time to time trouble has been experienced with this section of the railway, owing to the precipitous formation of the trace in places and to the liability of loose overhanging rocks falling on the line, and this danger has necessitated constant vigilance on the part of the railway officers and servants. In fact, the exceptionally severe weather at the end of 1901 made it desirable to suspend the running of the night mails over the section for a period of two weeks.

Early this year I felt that it was time the question of the safety of the Kadugannawa incline was definitely considered and settled; I accordingly deputed Mr. Oliver, the Chief Resident Engineer of the Northern section, to make a careful examination, and as his report revealed the fact that there were undoubtedly unsatisfactory places which required both immediate and future attention, authority was given to the Railway Department to undertake at once the more urgent works. I then decided to form a small expert Committee, and I was fortunate in securing from the Government of India the services of a competent Geological Engineer, Mr. C. S. Middlemiss of the Geological Survey of India. The other members of the Committee were Mr. Oliver, the Chief Resident Engineer of the Northern section, Mr. G. Dixon, Consulting Mining Engineer, and the General Manager of the Railway.

The result of their inquiries was that at two places it was found desirable to construct tunnels, one 440 yards long at mileage 58¾, avoiding the Meanagalla gallery, and one 210 yards long at mileage 63½, where the line is at present supported on a badly fissured rock. Sundry other minor operations and precautions were recommended, and the general verdict of the Committee was that when the works were completed the Kadugannawa incline would be in a satisfactory condition and that it was unnecessary to consider the question of any alternative route.

The principal urgent work undertaken was the removal of the "Lion's Mouth," a large rock estimated at 6,000 tons' weight, which overhung the line at mileage 63·40, and which showed dangerous signs of falling on to the line. As no deviation of the line was possible it became necessary to suspend traffic during the operations, and this was effected by giving previous notice to the public, so that they might get through a stock of urgent necessaries and food stuffs, whilst the aerial wire tramway from the Diyatalawa camp was brought to the spot and erected on the hillside for the conveyance of passengers' luggage and a limited quantity of goods, a pathway over the hillside being constructed for passengers. The work of removing the dangerous portion of the rock was completed in ten days and the line reopened, 542 lb. of dynamite being used to remove 3,000 tons of rock, whilst the remaining 3,000 tons of rock was subsequently taken away on Sundays, with only slight interruption of traffic. There was practically no injury to persons during the operations, whilst the only damage to goods was to chests of tea which fell off the wire tramway.

The rush of traffic up-country (principally rice) prior to the closing exceeded any previous record, no less than 9,300 tons of rice being despatched from Colombo in thirteen days, whilst the daily average tonnage of goods handled at the Colombo goods shed during the busy days was 1,000 outwards and 500 inwards, or a daily average of 1,500 tons.

Steady progress has been made with the other works recommended by the Committee, and this has necessitated the closing of the line on certain Sundays; but the operations are now nearly all completed, and there remains little but the construction of the two tunnels, the plant and staff for which have been ordered from home. It is anticipated that this work will occupy some two and a half years. An improved system of watching the condition of the incline generally has been adopted, and a special officer has been appointed, whose sole duty it is to look after the unsatisfactory spots.

The number of miles of railway in Ceylon has been increased by seventeen and a half, namely, the eleven miles from Avisawella to Yatiyantota and the six and a half miles from Nanu-oya to Nuwara Eliya. The mileage of railway in the Colony now stands at 386, as compared with 297⅛ when I assumed office.

The Tyer's electric train tablet system has now been extended to Panadure on the coast line and Ragama on the main line, but as a certain amount of trouble has been experienced in the working of the instruments it has been decided to accept the offer of the makers to send out one of their staff to go into the whole question.

In connection with the control of the railway electric telegraphs, &c., it has been decided that the amounts voted this year for the creation of a separate Railway Electrical Department under the control of the Railway shall be devoted instead to the creation of a separate Railway Department under the Postmaster-General's control. The extensions of the railway and the consequent increase in its electric telegraphs, &c., has made it essential that, whether it be controlled by the General Manager of the Railway or the Postmaster-General, a separate staff in charge of a competent trained railway electrician should be set apart for the efficient upkeep of the railway telegraphs and block instruments.

In the locomotive department all the rolling stock for the Uda Pussellawa extension has been constructed and erected, and progress is being made with the Northern extension and other sanctioned rolling stock. An installation of Stone's electric lighting for carriages has arrived, and experiments as to its working are now being made.

Up to the present time there has been no serious accident on the railway nor injury to the travelling public.

IRRIGATION.

The total expenditure on irrigation during the first seven months of the year was Rs. 458,569·62, as compared with Rs. 449,711 for the corresponding period in 1902.

Since the commencement of the year the works at Minneri and Kanukkeni have been practically completed. The former tank was all but full early in the year, but the water had to be lowered to permit of the construction of the sluices: water is now available throughout the 9 miles of old channel restored, and thence down the natural stream as far as it has been traced. At the latter the spill has at last been completed, and the breach is now closed.

The Nelawa rock cutting and tunnel on the Deduru-oya works is finished, and this, when the channel is trimmed up, will make a further area, probably of about 2,000 acres, irrigable from these works.

The improvement works at Sagamam, at the Walawe-ganga, on the Kalawewa Yoda-ela, and the construction of Maha Illuppalama are all nearing completion.

The construction of the anicuts at Rugam, the improvements to the Kirinde-oya scheme, and the works at Vakaneri have made good progress.

Of the large schemes the estimates for which were sanctioned last year, those at Karachchi and Unnichchai are progressing steadily, while the works at Nachchaduwa have been begun, and the restoration of the tank at Manankettiya, above the last named, is well in hand.

Only one estimate of importance, that for the restoration of Sangilikanadarawa in the North-Central Province, has been sanctioned this year by the Central Irrigation Board, but estimates for works at Vavunikulam in the Northern Province, and on the left bank of the Walawe-ganga in the Southern Province, have been completed, and will be submitted for consideration shortly.

The surveys at Akattimurippu and Mahakanadarawa have been finished, and those on the right bank of the Kirinde-oya, at Etimolewewa in Uva, and at Dewahuwa in the Central Province, will, it is expected, be finished before the next north-east monsoon sets in. The designs and estimates will be taken in hand as soon as possible.

Surveys of a complete line of ancient channels and tanks from the Dambulla-oya to Mahakanadarawa are now in progress; these will include surveys of Kandalama near Dambulla and Eruwewa near Mihintale, and pending their completion the restoration of Mahagalkadawala is in abeyance. It now appears almost certain that the restoration of Mahakanadarawa will prove of more benefit to the North-Central Province, and lead to much greater use of the Northern railway, than the restoration of Mahagalkadawala, the commencement of which has been rendered impracticable owing to scarcity of labour due to its proximity to the Northern railway.

In addition to the larger works enumerated in the above paragraphs, the irrigation engineer specially appointed for minor works has small irrigation works in hand in three districts of the Central Province and in one of the Uva Province; he might have more if the irrigation sub-inspectors available could find time to attend to them.

During the last few months labour has been obtainable in somewhat larger numbers than formerly, but it is still scarce, and arrangements are being made for obtaining further supplies from India for both Vakaneri and Karachchi. The pioneers from Kanukkeni, Minneri, and the Deduru-oya are to be concentrated at Nachchaduwa, where a large quantity of masonry work has to be done. The value of the pioneers to the Irrigation Department cannot be over-estimated, and by this concentration it is hoped recruiting may be encouraged.

For the time being the number of irrigation engineers in employment by the department is complete, and there are few vacancies for officers of any grade. This is certainly satisfactory, as the number of works requiring attention is greater than the present staff can cope with, and it is essential it should be kept up to its full strength.

The completion of the restoration of Minneri tank, which has already been referred to, without doubt ranks as the most important event in the irrigation history of the year. The date at which this tank was first constructed is unknown, but it was so well constructed that the bund has never been breached, and the restoration of the tank itself, without taking account of the supply that can be ultimately made available when required by the restoration of its ancient supply channels, adds from 10,000 to 15,000 acres to the irrigable land of the Island.

LABOUR.

The number of estate coolies who arrived in Ceylon during the first seven months of 1902 was 19,651. During the first seven months of this year the number was 20,985, so that immigration appears to be slightly more active than last year.

Nevertheless, a certain scarcity of labour has been complained of during the year, and it has been suggested that this is due to a dislike of the sea voyage from Tuticorin and the detention at Ragama. On the other hand, the kanganies admit a preference to the Colombo route over the North road. The scarcity is, with more likelihood, due to the large number of coolies (135,000) who arrived in 1900. The estates were unable to provide work for anything like this number. Large numbers got heavily into debt, and either left or were sent back to the coast by the kanganies when the latter could not get full work for them. These men now refrain from coming to Ceylon, and will stay away as long as they can subsist in India, as they know that they will be liable in Ceylon for their old debts, and that what they earn will for years go to the kangany.

The Tuticorin-Colombo route has now for some years been the principal outlet for the stream of cooly emigration from India to Ceylon, and it will no doubt continue so until the time when the lines of railway connecting Ceylon and South India, projected and now under construction, turn the tide *viâ* Paumben, with its practical immunity from sea voyage—a factor which influences the immigrant cooly to an extent more pronounced than is perhaps generally thought. The closing of the North road and the regular means of transport afforded by the practically daily service of the British India steamers to Colombo have rendered the Tuticorin-Colombo route increasingly patronized over all others. The advantages gained year after year by the admirable working of the Tataparai depôt and the facilities for transmission by steamer are seen and appreciated by the coolies themselves. Few, if any, complaints of blackmailing, extortion, and ill-treatment are heard of now from those using this route and benefiting by the prompt and effective service rendered through the Tataparai depôt. On the other hand, at Ammapatam and Tondi, the former more particularly, such complaints are made, and the conditions are similar to those at Tuticorin in former days.

The special assistance afforded now to immigrants who avail themselves of the tin ticket system is undoubtedly appreciated, and will doubtless be taken advantage of more and more. Its

popularity is proved already by the increasing number of immigrants coming to Ceylon under the system, as well as by the extended support of agents and superintendents in Ceylon. The registration of estates has continued, and will soon, I trust, be universal.

Trichinopoly is still far and away the chief source of the Ceylon labour supply, though it is the smallest district in Southern India. For the seven months January–July of this year 16,275, or 65 per cent., came from Trichinopoly, 3,544 or 15 per cent. from Madura, 1,396 or 5 per cent. from Tanjore, 1,024 or 4 per cent. from Tinnevelli, and 1,021 or 4 per cent. from Salem.

Madura and Tanjore used to be very heavy contributors in years gone by. One would expect more results from Tinnevelli, the district in which Tataparai and Tuticorin are situated. It is believed that large numbers of Tamils do come over to Ceylon still from this district, but not as estate labourers so much as rickshaw and town coolies.

Salem and South and North Arcot seem to show signs of elasticity, as also more recently does Coimbatore, a fact which may be due to recruiting efforts in those districts.

Few tin ticket coolies pass through Paumben at present, the number for the past seven months of the current year being only 155. The buildings there are of a purely temporary character, kept up with only actual necessary repairs, in order that they may be ready in case an epidemic breaks out. The topes or camping grounds, which are the property of the Ceylon Government, have been fenced and planted with cocoanuts, which add to their value and usefulness. Paumben will probably become in the future the port of embarkation for most of the immigrant coolies, and further land is available for extending the camp if required.

The Government Agent of the Western Province reports as follows on the working of the cooly depôt at Ragama and the tin ticket system: "During November and December, 1902, 4,079 estate coolies passed through Ragama camp, making a total of 33,788 for that year. During the seven months January–July, 1903, 29,985 coolies arrived. There was the usual decrease in numbers from November to March, as in these months the stream of cooly immigration is least active.

"The tin ticket system has steadily progressed during the period under review, and the proportion of tin ticket coolies arriving has risen regularly from 50 per cent. in January to 75 per cent. in July. It is expected that by the end of the year the number of coolies travelling on their own account will be very small.

"The working of the camps at Ragama has been entirely satisfactory. During the current year there was only one outbreak of cholera at Ragama, with one case and one death, as against three outbreaks, with eighteen cases and thirteen deaths, last year.

"The Boer prisoners of war left Ragama at the end of 1902, and their camps have been handed over for cooly purposes. This has given much greater facilities for segregating and dealing with outbreaks of infectious disease. The camp now covers 42 acres, and is equal to any possible call which could be made upon it."

The Volunteer Force.

The progress of the Volunteer movement during the current year has been satisfactory.

In January the Ceylon Volunteer Force was increased by the formation of a new detachment at Tangalla and a law students' company in Colombo. They are both doing exceedingly well, fully justifying their formation.

Since the beginning of the year all ranges have been, or are in the course of being, provided with new targets in place of the old obsolete patterns. They have also been brought up to the requirements of the new musketry course which was adopted this year. Great improvement has been shown in the musketry of the various units of the Ceylon Volunteer Force, notwithstanding the fact that the new course is a considerably more difficult one than the old. Two friendly shooting matches took place between teams from the Ceylon Volunteer Force and the Singapore and Agra Volunteers. In both cases the Ceylon team was successful, beating the former by 23 and the latter by 80 points. The Ceylon team made the fine average of 91·87 under adverse conditions. A team visited India in September and took an effective part in the Southern India Rifle Association meeting at Bangalore.

All the permanent staff were for the first time attached to the regular regiment for a fortnight's instruction, to bring them up to date in their drill, &c.

The new pattern khaki coat has been adopted and breeches and putties substituted for trousers. Sanction for adopting a new helmet has also been applied for. White uniform has been adopted for use by the band when playing at public and private engagements.

The annual camp this year was transferred from Urugasmanhandiya to Diyatalawa, with great benefit to the force. Owing to the extension from eight to fifteen days far more work was undertaken, and considerable experience was gained from manœuvering over such good training ground as Diyatalawa affords. The attendance was a record one for all units. The numbers of the various corps that attended camp were as follows: Ceylon Artillery Volunteers 111, Ceylon Light Infantry 880, Ceylon Mounted Infantry 56, Bearers 30, Cyclists 11, Ceylon Planters' Rifle Corps 145, and Cadet Battalion Ceylon Light Infantry 201, making a total of 1,434 of all ranks. A noteworthy feature of the camp was the attendance for the first time of the cadets.

Colonel Vincent, C.M.G., Commandant, went on leave on 23rd February. During his absence Colonel Wintour, 2nd West Kent Regiment, acted, but on his leaving on 16th May Colonel Farquharson, Ceylon Planters' Rifle Corps, was appointed to officiate until Colonel Vincent's return two months ago.

The strength of the various component units of the Ceylon Volunteer Force was on 31st July as follows: Ceylon Artillery Volunteers 160, Ceylon Mounted Infantry 134, Bearers 66, Cyclists 22, Ceylon Light Infantry 1,225, Ceylon Planters' Rifle Corps 718, Cadet Battalion Ceylon Light Infantry 452, giving a total of 2,777 of all ranks. This, however, does not include about 100 recruits who have since been enrolled and also attended camp.

The Public Service.

There have been few changes in the Public Service during the past year. Mr. E. M. D. Byrde, Government Agent of Sabaragamuwa, and Mr. J. D. Mason, District Judge of Galle, have retired from the Civil Service, and Mr. Dodwell Browne has relinquished his post on the bench of the Colombo District Court. The places of these gentlemen have been filled by Mr. G. Saxton at Ratnapura,

Mr. G. A. Baumgartner at Galle, and Mr. Joseph Grenier at Colombo. The vacancy in the office of Conservator of Forests has been filled by the appointment of Mr. J. L. Pigot, whose services have been temporarily lent us by the Indian Government. Mr. J. Harward has succeeded Mr. S. M. Burrows in the Directorship of Public Instruction, his place at the Royal College being taken by Mr. C. Hartley.

I have to record with regret the death in December last of Mr. T. B. Panabokke, the retired Police Magistrate of Gampola. Mr. Panabokke was for many years the Kandyan representative in this Council, and a deservedly respected Kandyan chief. Another well-known native servant of Government has passed away during the past year in the person of Mudaliyar Barr Kumarakulasinkam, who had for many years worthily performed the duties of Chief Tamil Interpreter and Translator.

The last twelve months have been noteworthy for the number of honours conferred on public men in this Island. In addition to the Knighthood bestowed on the Chief Justice, Mr. F. H. Grinlinton and the Hon. Mr. J. Ferguson have been admitted as Companions of the Order of St. Michael and St. George, while Messrs. C. A. Murray, H. L. Moysey, F. W. Vane, and E. de Kretser are among the first Companions of the Imperial Service Order. Lastly, the title of King's Counsel has been conferred on the Hon. Mr. A. G. Lascelles, Attorney-General, Mr. P. Ramanathan, Solicitor-General, Mr. F. Dornhorst, and Mr. T. E. de Sampayo.

Prisoners of War.

The prisoners of war have, as was to be expected, almost all left our shores. Of the 2,844 who were still in Ceylon when I opened the last session of Council, 2,780 were released and 8 died before the close of 1902, while 51 of the remaining 56 have left during the current year. The other five refused to take the oath of allegiance, and at the same time declined to proceed elsewhere than to South Africa. They have therefore been released in the Island, though they have been informed that the Government is at any time ready to provide them with a passage to any place except South Africa, or to South Africa if they will take the oath of allegiance.

There are thus no longer any prisoners of war left in our midst, and the responsibility which I undertook in 1900 is at an end. I am confident that you will agree with me that the share of the burden of the war thus borne by Ceylon has redounded both to the credit and to the prosperity of this loyal Colony.

Legislation.

Ordinance No. 14 of 1902 provided that litigants resorting to village tribunals should contribute to the cost of these courts by requiring the plaintiffs in all civil cases to pay a stamp duty amounting to 10 cents in cases of Rs. 20 and under, and to 50 cents in cases where a larger amount is in question.

The number of lashes or strokes which may legally be inflicted in cases where the punishment of whipping is awarded, whether by a court of law or by prison authorities, was limited by Ordinance No. 15 of 1902.

More effective control over printing presses was secured, and, it is hoped, the publication and distribution of scurrilous and offensive literature checked, by the Printing Presses Regulation Ordinance, No. 16 of 1902, which requires all printing presses in the Island to be registered, and contains a provision, in force in other parts of the Empire, that all printed books and papers should have legibly printed on them the name of the printer and publisher and the place of publication.

An improvement in the procedure under the Leper Ordinance of the preceding year was introduced by Ordinance No. 17 of 1902.

The question of the liability of the owners of animals trespassing or straying upon the Government railway, with regard to which the Ordinance of 1902 was silent, is dealt with by Ordinance No. 1 of 1903, which recognizes the principle that owners should be held responsible only in cases where the trespass takes place upon a railway which is protected by efficient fences.

Ordinance No. 2 of 1903, without affecting the main principles of the Customs tariff, introduced certain amendments of detail which had been necessitated by alterations and developments in the course of trade, such, for example, as the growing importation of liquid fuel.

By Ordinance No. 3 of 1903 the previous Ordinances with regard to the repression of crime were consolidated and amended. In particular, the procedure for the allocation and recovery of the amounts charged to defray the cost of punitive police, or as compensation, was revised with the view of securing greater simplicity and efficiency.

Ordinance No. 4 of 1903, by enacting that the notices for claims to land dealt with under the Waste Lands Ordinance should be published once only, instead of six times, in the *Governmen Gazette*, relieved the *Gazette* from the publication of much superfluous matter without, it is believed, impairing the efficiency of the notice required by the Ordinance.

Important amendments in the law of criminal defamation were effected by Ordinance No. 5 of 1903. With the object of preventing the institution of criminal actions for defamation in cases where the civil remedy would satisfy the requirements of justice, the Ordinance prohibited the institution of such cases without the previous sanction of the Attorney-General. The Ordinance, on the other hand, provided for the punishment of inveterate offenders by empowering the courts, in cases where the offender had been previously sentenced to twelve months or upwards, to award the punishment of hard labour.

The following measures will be laid before you during the present session :—

You will be asked to give priority to an "Ordinance to amend the Ceylon Paper Currency Ordinance, 1884," the object of which is to modify that section of Ordinance No. 13 of 1901 under which the Commissioners of Currency are bound to issue notes inexchange for gold without limit. The recent representative Commissions on the Scarcity of Silver unanimously consider that this provision is at the root of the difficulty, and a bill has therefore been drafted empowering the Commissioners of Currency to refuse to issue notes for gold when it is inexpedient in their judgment to do so. The details of the measure will be laid before you in due course, and I shall endeavour to explain the necessity for it more fully in the review of my administration.

In order to enable Ceylon to adhere to the International Convention for the Protection of Industrial Property a measure will be introduced for the amendment of the Inventions Ordinance of 1892 and of the Trade Marks Ordinance of 1888, and for the protection of designs.

The legislative programme for the year also includes measures with regard to the surrender of fugitive criminals from the Confederated Malay States, the solemnization of marriages in Ceylon under the Foreign Marriages Act, and the registration of medical practitioners, whilst measures will also be introduced for the amendment of the existing Ordinances relating to the granting of opium licenses, the holding of commissions of inquiry, and the Ceylon Government Railway.

There are many other subjects of interest and importance on which I should ordinarily address you on this occasion, such as the pearl fishery, the inception of the mineralogical survey, the appointment of an electrical engineer, and so on; but I propose to deal fully with these and other matters in the review of my administration which I shall shortly lay before you.

GENTLEMEN OF THE LEGISLATIVE COUNCIL,

I now leave you to deal with the business which will be duly laid before you. It causes me great regret to think that I shall preside over only two more of your sittings, but I am confident that you will accord to the distinguished and experienced administrator who has been selected to succeed me the same cordial and efficient co-operation which I have always enjoyed at your hands, and I pray that, under the Divine guidance, your deliberations will conduce to the increased welfare, prosperity, and happiness of the community, and to the continuance of those blessings which Ceylon has so abundantly enjoyed during the last eight years.

I now in the King's name declare this Session of the Legislative Council to be duly opened.

3. His Excellency the Governor having retired, His Excellency the Lieutenant-Governor took the Chair.

PAPERS.

4. The Treasurer laid on the table the following paper:—

Sessional Paper XXVII. of 1903:—

Papers relating to the Commissions on the scarcity of Silver in Ceylon.

ADDRESS IN REPLY TO HIS EXCELLENCY THE GOVERNOR'S SPEECH.

5. On the motion of the Treasurer, seconded by the Attorney-General, the Treasurer, the Government Agent, Western Province, the Hon. Mr. W. G. Rockwood, the Hon. Mr. S. C. Obeyesekere, the Hon. Mr. W. H. Figg, and the Hon. Mr. E. Rosling were appointed a Committee to frame a reply to the Address of His Excellency the Governor, with instructions to bring up the draft reply at the next meeting of Council.

MESSAGE.

6. The Treasurer, on behalf of the Lieutenant-Governor, brought up the following Message from His Excellency the Governor to the Legislative Council, which was read by the Clerk of the Council:—

THE Governor has directed the Estimates of Revenue and Expenditure for the year 1904 to be laid before the Legislative Council.

REVENUE.

The Revenue for 1904, which has been calculated on the basis of the actual receipts for the current year, is estimated to yield Rs. 28,651,370. This is Rs. 1,606,990 more than the revenue originally estimated for the current year, but is Rs. 278,310 less than the probable actual revenue for the current year.

The Customs Receipts thus show an increase on the Estimates for 1903 of Rs. 278,500, partly in Imports and partly in Exports, the greatest increase being in export of arrack. An increase is also assumed on plumbago.

Pilots' fees are expected to yield an increase of Rs. 26,000.

Licenses, Excise, and Internal Revenue not otherwise classified are estimated to give an increase of Rs. 463,720, chiefly on salt and arrack. The 10 per cent. rise in salt receipts is a regular annual occurrence.

Fees of Court should give Rs. 59,670 additional, and Post and Telegraphs should give Rs. 71,800 additional.

Railway revenue is on the increase. The Kelani Valley line has from the first more than fulfilled the anticipations of revenue, and even now yields a profit on working expenses, though this profit is rather more than absorbed by interest and sinking fund on capital expenditure. The opening of the new section to Yatiyantota, which now first taps the chief tea-producing district of those parts, should add considerably to the revenue, and should show a clear profit even when interest and sinking fund are taken into consideration.

Under the head of Miscellaneous Receipts there is a large increase, chiefly due to an item of Rs. 120,000 for profit on new coins—an item of revenue which it is only rarely possible to foresee. Under head of Sale of Government Property account is not taken of profit on a possible Pearl Fishery. An increase is anticipated of Rs. 9,100 on sale of produce from Botanic Gardens and of Rs. 10,000 on timber sales, but, on the other hand, there will be a probable decrease of Rs. 2,900 on crops on Crown land and of Rs. 4,300 on sundries. The nett gain on Sale of Government Property should be Rs. 11,900.

By the sale of Crown lands a further sum of Rs. 120,000 above the amount estimated for the current year should be received.

EXPENDITURE.

The estimated Expenditure is Rs. 28,652,830, or Rs. 1,575,389 more than that estimated for the current year, and this increase occurs in almost every Department, including the Public Works Department for extraordinary works.

The increase is partly due to increments of salary earned, a form of increase which must continue until a sufficient period has elapsed from the time of the adoption of incremental schemes to bring about a state of equilibrium between increments earned and those lapsing owing to the retirement of officers and the substitution of new officers on initial pay. The increase is, however, chiefly due to the expansion of such Departments as the Medical, Educational, Postal-Telegraph, and the Railway, and especially to enlargement of the Land Settlement Department. The increase in numbers and efficiency of the Volunteer Force has also contributed largely to the increase of expenditure of next year.

Two or three large special items have also helped to swell the Estimates, viz., the St. Louis Exhibition (Rs. 100,000), the work on the Kadugannawa Incline (Rs. 265,000), and the new Public Works Department offices (Rs. 100,000).

Moreover, the estimates of departmental expenditure, other than personal emoluments, have not been curtailed to the extent which has been usual in previous years. A practice had grown up of cutting down such estimates in the hope of forcing Heads of Departments into keeping within the reduced figures; but in the result it was almost always found that long before the end of the year the sums allowed had been exhausted, and further provision had to be made on the Supplementary Estimates. It is obvious that this practice is conducive to extravagance rather than economy. An attempt has, therefore, been made this year to estimate the requirements of the coming year on the actual expenditure of the three previous years. This, of course, largely increases the votes in the year's Supply Bill, but it should proportionately decrease Supplementary Supply for 1904.

PUBLIC DEBT.

This stands as last year.

PENSIONS.

Pensions show an increase of Rs. 73,888: Rs. 39,398 on those payable by the Treasurer and Rs. 35,490 on those payable by the Crown Agents, while there is a decrease of Rs. 1,000 on those payable by the Government's Agencies in India; but this is an item over which we have little control.

ESTABLISHMENTS.

Civil Service.

There is a slight increase, but only by increments earned and by increase of pay to Cadets who have passed their first examinations.

Secretariat.

Besides the annual increments of salaries, provision has been included for an extra précis writer and two additional typists, necessitated by the large increase in volume of correspondence The ever-increasing work of the Colonial Secretary's Office has to be provided for. The votes for Other Charges have been increased by Rs. 2,400, and that for the Printing Office by Rs. 4,000.

Audit.

Three extra clerks at Rs. 330 each have been provided, and the vote for Other Charges has been increased by Rs. 887.

Treasury.

The vote for destruction of unserviceable currency notes has been increased by Rs. 800, and should, for sanitary reasons, be hereafter further increased.

Provincial Administration.

There is a decrease of Rs. 22,007 under this head, which is accounted for chiefly by the omission of the votes to Government Agents for expenses in connection with the working of the Waste Lands Ordinances, and a reduction in the amount to be paid for hire of immigrant vessels.

Survey Department.

There is a new item of Rs. 9,750 for field allowances to Superintendents and Assistant Superintendents, given in consideration of the exceptionally unhealthy circumstances of their field work. There is also an increase of Rs. 10,900 for triangulation towers.

Port and Marine.

On this there is a decrease. Rs. 5,000 is assigned to the Master Attendant, Colombo, for enlarging the mooring boat slipway, and there is a small increase of Rs. 2,000 under Other Charges to the Resident Engineer, Harbour Works, for dredging and stores and for labour, boat hands, &c. But, on the other hand, a sum of Rs. 20,000 out of Rs. 30,000 formerly allotted to the Master Attendant in connection with Immigration has been discontinued as no longer necessary. Under Port and Marine (other than Colombo) a small new expenditure has been provided for in connection with the maintenance of the harbour light at Hambantota and for re-arrangement of buoys at Batticaloa.

Botanic Gardens.

The Experiment Station, Peradeniya, accounts for an excess of Rs. 11,433, but the loss on the working of this estate is becoming gradually less, and should ultimately disappear. A sum of Rs. 10,000 has been included for an important experiment in the cultivation of cotton along the line of the Northern Railway; and in the same connection a small sum has been provided for an Experimental Garden at Jaffna. The vote for the upkeep of the Nuwara Eliya Park and Garden has been slightly increased.

Museum.

There is an increase of Rs. 2,000, of which Rs. 500 is for purchase and binding of books and Rs. 1,500 is for the cost of the publication of the *Spolia Zeylanica*, being the record of the scientific work of the Museum and also of a new Guide to the Museum.

Supreme Court.

There is an increase of Rs. 2,760 to provide for the more rapid typing of documents and consequent acceleration of business.

Police Courts.

Of the increased amount (Rs. 7,978) under this head, Rs. 6,325 is for an Itinerating Magistrate for the Southern Province. This is a new appointment which has for some time been under consideration, and is now to be tried as a means of dealing more effectually with crime in that Province.

Police.

There is an increase under this head of Rs. 8,101. Some of the sub-votes under Other Charges, Inspector-General of Police, have been increased, and there are three or four items of special expenditure for typewriters, an iron safe, and headmen's notebooks. The largest additional item is, however, a sum of Rs. 3,000 for an additional Assistant Superintendent to take charge of detective work.

Prisons.

The large increase of Rs. 24,590 is chiefly made up by increased provision for additional staff and for maintenance of prisoners.

Medical Department.

The Superintendent of the Leper Asylum has been given a well deserved personal allowance; and the votes for travelling, which had proved quite insufficient, have been increased. The additional amount is Rs. 9,209.

Hospitals and Dispensaries.

There is a large increase here of Rs. 39,011, which is practically entirely due to the fact that the votes on previous years have proved insufficient.

Ecclesiastical.

The decrease is due to the retirement of the Presbyterian Colonial Chaplain of Kandy and to the death of the Incumbent of Kurunegala Church.

Education.

The increase is Rs. 61,625. This is accounted for chiefly as follows: an Inspectress of Needlework at a salary of Rs. 4,000 has been allowed. Annual increments and a slight increase to the salary of the Drawing Master at the Technical College absorb Rs. 1,170. To the Training College, which is doing most excellent work, a Vice-Principal at a salary of Rs. 4,200 and an additional Assistant for the Practising School at Rs. 600 have been allowed. In connection with the increased demand for Science-teaching in preparation for public examinations, an Assistant Science Master at a salary of Rs. 600 has been allowed at the Royal College. But the chief increase under Education is, as usual, the automatic increase in vote for Grants-in-aid (Rs. 35,847), and in Grants to Pupil Teachers (Rs. 3,000) and to Monitors (Rs. 5,000).

Military Expenditure.

There is a large increase of Rs. 117,237 on Military Expenditure. The chief item is a sum of Rs. 106,500 to provide for a military sanitarium at Nuwara Eliya, or rather for the conversion of the former quarters at that place of the General Officer Commanding into a sanitarium, and the consequent building of new quarters for the General Officer Commanding. This is a question which has been under negotiation for a very long time—to the great hindrance of the completion of the Uda Pussellawa Railway. It has now been settled as above indicated; and it may be mentioned that in return for the concession thus made to Military interests Military land at Nuwara Eliya amounting to 227 acres is finally assigned to the Government. Another considerable item under this head is a sum of Rs. 9,690 for a Musketry Camp at Diyatalawa, which the Secretary of State considered should be paid for by this Colony; also a sum of Rs. 4,500 for a Rifle Range. It has also been thought right to ask for a sum of Rs. 12,000 to cover excess of expenditure over estimates incurred in the construction of various Military buildings in Colombo.

Miscellaneous.

There is a decrease due to the omission of the vote, no longer required, for work in connection with Buddhist Temporalities. The large nett increase of Rs. 90,400 is due to the Rs. 100,000 for the St. Louis Exhibition and to a sum of Rs. 10,000 set aside for the continuance of the work of the Marine Biological Laboratory. A sum of Rs. 12,000 has also been inserted as a contribution to the establishment of a Zoological Garden; but no part of this will be spent without further approval of the scheme by the Legislative Council.

Forest Department.

A nett decrease of Rs. 4,158 is here shown. There is an increase of Rs. 3,948 under Personal Emoluments, but the vote for Other Charges is reduced by Rs. 10,160. Under the head of Surveys, Demarcation, &c., the decrease is Rs. 17,872, while nearly Rs. 3,100 has been added on account of Communications, Buildings, &c.

Post and Telegraphs.

Besides the usual annual increments of salaries, there have been some additions to the Establishment, notably 2 clerks, 3 postmasters, 1 sorter, 8 inspectors, 4 linemen, and 2 Assistant Superintendents for the Telegraph Branch.

Under Other Charges the total increase is Rs. 31,376, of which Rs. 5,000 is for Travelling, Rs. 2,500 for allowance to Railway Station Masters, Rural Receiving Offices, Rs. 10,812 for Telegraph Line Maintenance, and Rs. 2,300 for Telephone Line Maintenance.

Railway Department.

The total increase here is Rs. 801,650. Of this a sum of Rs. 81,850 is the increase on Personal Emoluments. This includes, besides annual increments, provision of Rs. 6,000 for a Machine Shop Foreman and a European Draughtsman for the Locomotive Department; Rs. 16,057 increased provision for the Kelani Valley Section, necessitated by the opening of the line to Yatiyantota; and Rs. 36,944 new provision for the Uda Pussellawa Section. Under Other Charges the increase is Rs. 280,736, distributed chiefly as follows: Ways and Works Department, Rs. 108,656; Locomotive Department, Rs. 79,550; Traffic Department, Rs. 6,100; increased provision for Kelani Valley Section, Rs. 31,319; and for the Uda Pussellawa Section, Rs. 73,498.

Under Special Expenditure the large increase of Rs. 307,490 is chiefly due to the provision of of Rs. 265,000 for work on the Kadugannawa Incline (which will be charged against surplus funds) and Rs. 55,000 for renewal of axle bogies. The increase on New Works is Rs. 131,574.

Land Settlement Department.

The large excess of Rs. 36,740 on this is due to the appointment of additional officers and increase of votes for working the Waste Lands Ordinances; but it is to some extent counterbalanced by a decrease, which has been noticed under its proper head, on "Provincial Administration." A Member of the Executive Council has been appointed to the charge of this Department, and receives an allowance of Rs. 3,000. The new Assistant Settlement Officer's salary and allowance amounts to nearly Rs. 12,000, and the vote for Expenses has been increased by Rs. 10,000, while a separate sum Rs. 5,475 has been provided on account of the allowance for the Settlement Officer (Mr. Fraser). It is confidently anticipated that this considerable increase in expenditure will lead to very rapid acceleration of the work.

Consulting Electrical Engineer.

This new appointment will, it is believed, fully justify itself. The amount voted under this head is Rs. 13,134.

Public Works Department.

There is an apparent decrease under this head; but this is only due to the fact that the salary for the Consulting Electrical Engineer has been separately voted this year.

Public Works.

For Works Annually Recurrent a sum of Rs. 2,067,580 is required, Rs. 15,357 more than was asked for the current year.

For Public Works Extraordinary Rs. 2,058,011 has been placed on the Estimates, for work the details of which are explained in the annexed memorandum by the Director of Public Works. It is proposed to charge Rs. 417,780 against Surplus Funds.

SUMMARY.		Rs.
The estimated expenditure stands at	...	28,652,830
Deduct charge on surplus funds	...	682,780
		27,970,050
Estimated revenue ...	...	28,651,370
Estimated surplus ...	...	681,320

BILLS.

7. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to further amend 'The Ceylon Paper Currency Ordinance, 1884,'" was read a first time, and the second reading was fixed for the next meeting of Council.

8. On the motion of the Auditor-General, on behalf of the Lieutenant-Governor, seconded by the Treasurer, the Bill intituled "An Ordinance for making provision for the Contingent Services for the year 1904" was read a first time, and the second reading was fixed for the next meeting of Council.

ADJOURNMENT.

9. On the motion of the Auditor-General, the Council was on its rising adjourned till Saturday, October 31, 1903, at 2.30 P.M.

SATURDAY, OCTOBER 31, 1903.

PRESENT:

His Excellency the Right Hon. Sir J. WEST RIDGEWAY, G.C.M.G., K.C.B., K.C.S.I., *President.*

The Hon. Mr. E. F. IM THURN, C.B., C.M.G.
The Hon. Brigadier-General G. L. C. MONEY, C.B., D.S.O., A.D.C.
The Hon. Mr. A. G. LASCELLES, K.C.
The Hon. Mr. F. R. ELLIS, C.M.G.
The Hon. Mr. H. H. CAMERON.
The Hon. Mr. G. M. FOWLER.
The Hon. Mr. H. L. CRAWFORD.
The Hon. Mr. H. L. MOYSEY, I.S.O.
The Hon. Mr. W. G. ROCKWOOD, M.D.
The Hon. Mr. S. N. W. HULUGALLE.
The Hon. Mr. F. C. LOOS.
The Hon. Mr. W. M. ABDUL RAHIMAN.
The Hon. Mr. W. H. FIGG.
The Hon. Mr. E. ROSLING.
The Hon. Mr. GILES F. WALKER.

1. The Council met pursuant to adjournment. The Lieutenant-Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.

MOTION.

3. With the permission of the Council, the Hon. Mr. W. G. Rockwood, seconded by the Hon. Mr. S. N. W. Hulugalle, moved—That this Council do present a Farewell Address to His Excellency the Governor on the eve of his departure from the Colony, and that a Committee consisting of the Lieutenant-Governor, the Attorney-General, the Treasurer, the Principal Collector of Customs, the Hon. Mr. W. H. Figg, the Hon. Mr. Giles F. Walker, the Hon. Mr. S. C. Obeyesekere, and the mover be appointed to prepare the Address.

The motion was agreed to.

COMMITTEE.

4. The Treasurer brought up the report of the Committee appointed to frame the reply of the Council to the Address of His Excellency the Governor, and moved that it be read by the Clerk of the Council, and it was read accordingly.

On the motion of the Treasurer, seconded by the Auditor-General, the reply as drafted was agreed to. The Council then adjourned to await the arrival of His Excellency the Governor.

5. His Excellency the Governor having arrived took the Chair.

6. The Lieutenant-Governor read the following Address in reply to His Excellency the Governor's Speech of the 26th October, 1903 :—

MAY IT PLEASE YOUR EXCELLENCY,

IT is a popular axiom that the phases of happiness and prosperity in this life are but of comparatively short duration. That theory, however, has received emphatic refutation at the hands of Your Excellency, whose wise administration has, under Providence, enabled this Colony to enjoy a halcyon period of eight years of unbroken prosperity.

This Council desires to thank Your Excellency for the kindly words in which you have referred to its relations with Your Excellency.

The period of Your Excellency's administration has, indeed, been a prosperous period for Ceylon, from its commencement in February, 1896, up to its termination in November, 1903. But there have not been wanting occasions, which it is needless here to enumerate, when, with a less wise judgment in command, and a less firm hand upon the helm, disaster would have been inevitable.

Financial Position.

This Council hails with satisfaction the favourable account which Your Excellency has been able to give of the present financial position of the Island.

The extension of useful and remunerative expenditure is no less satisfactory than the expansion of the revenue.

Trade, Harbour Administration, and Shipping.

The account given by Your Excellency of the present condition of the trade of the Island is as encouraging as are the prospects of its future development, when the improvements in Harbour accommodation and facilities for shipping inaugurated by Your Excellency shall have reached completion.

Public Works; Railway Extension.

The list of Public Works executed during the past twelve months forms a worthy sequel to those which have marked the conclusion of previous years, whilst the record of railway extension furnishes a happy realization of the prospects held out by Your Excellency at the commencement of your administration.

Education.

The fact noticed by Your Excellency that education in Ceylon has during the past year received more than its usual share of public attention is, in the opinion of this Council, fraught with hopeful promise; and, although the Council must abstain from anticipating the recommendations of the Committee appointed to report on the question of an Educational Cess, it is sanguine that those recommendations coupled with, or rather following upon, the liberal policy adopted by Your Excellency in the establishment of the Government Training College and of the Technical College will be of a nature calculated to give a powerful stimulus to the public appetite for education.

Technical College.

The progress already made in the development of the Technical College, and especially in its most recently opened branch, the department of drawing, is a source of the greatest satisfaction to this Council.

Surveys; Land Settlement; Royal Botanic Gardens.

The extended operations of the Survey Department and the already substantial work done by the Land Settlement Office bid fair to bring forth valuable results in the future; whilst the labours of the Botanic Department, facilitated by the liberal provision that Your Excellency has made for their operation, will afford the necessary encouragement and instruction to enterprising capitalists as well as to native villagers to make use of the land which survey and settlement shall have placed at their disposal.

General Health; Medical Department.

The Council recognizes with satisfaction the practical absence from the Island during the past twelve months of serious epidemic disease. It congratulates Your Excellency upon the extension of hospital and dispensary provisions calculated to hold in check those forms of illness that are incidental to the ordinary conditions of life, and thus to minimize the sufferings of the poor; and more especially does it felicitate Your Excellency on the inauguration of the Eye Hospital at Borella, which, whilst forming a fitting memorial of our late beloved Sovereign, will always serve also to remind the people of Ceylon of the gracious lady whose action in laying the foundation stone of the building was but a symbol of the share she had in the inception and development of the philanthropic work it is destined to enshrine.

Irrigation.

The list of irrigation works already completed, in progress, and in contemplation, which Your Excellency has furnished to this Council, is full of interest and of happy augury, especially to those who can remember the desolate condition of the drier districts before the restoration of the ancient works of irrigation was commenced.

The Volunteer Force.

The Council congratulates Your Excellency on the progress made in the Volunteer movement under Your Excellency's inspiriting influence, for, apart from any question of the remote contingency of their being called upon to aid in the defence of these peaceful shores, it is not difficult to recognize the beneficial effects of military training and martial exercise.

Prisoners of War.

Your Excellency has passed over in two short paragraphs of your Address the closing chapter of the history of the prisoners of war in Ceylon; but this Council ventures to hope that the promised review of Your Excellency's administration will contain a full account of the exceptional service, which, thanks to the courage, the enterprise, and the ability of Your Excellency, this loyal dependency of Ceylon was enabled to render to the Empire—a fitting sequel to the prompt response made by the Island to the call to arms at the close of 1899, when she sent out to South Africa so gallant and so efficient a contingent.

Legislation.

The Council notes with pleasure, as indicative of the smoothness with which the machinery of administration is now moving, the brevity of the list of legislative measures that in Your Excellency's opinion require immediate attention, and the Council is glad to promise its earnest and careful consideration of the same.

7. His Excellency the Governor replied as follows :—

GENTLEMEN OF THE LEGISLATIVE COUNCIL,

I AM most grateful to you for this gracious Address and for the very kindly sentiments which it contains, not only in reference to myself, but to Lady Ridgeway. I rejoice that you share the satisfaction that I undoubtedly feel at the prosperous condition of our finances and the efficient condition of the administration generally.

NOTICES OF MOTIONS.

8. The Lieutenant-Governor gave notice that he would at a sitting of Council not less than one month from the date of notice move that a toll be established on the minor road from Arambakada to Bokkawala, in the Katugastota District of the Central Province.

9. The Lieutenant-Governor gave notice that he would at a sitting of Council not less than one month from the date of notice move that tolls be established on the following minor roads in the North-Western Province, namely :—

(1) On the District Road Committee road from Pannala to Kuliyapitiya.
(2) On the District Road Committee road from Kadahapola to Rambawewa.

PAPERS.

10. The Lieutenant-Governor laid on the table the following Papers:—

Sessional Papers, 1903:—

No. XXIII.—Papers relating to the question of Overtime paid to Customs Officers.
No. XXIV.—Correspondence relating to the removal of rocks on the Kadugannawa Incline.
No. XXV.—Review of the Trade in Ceylon for the Year 1902.
No. XXVI.—Despatches relating to the appointment of Unofficial Members of the Executive Council.
No. XXIX.—Administration Report of the Municipal Council of Colombo for 1902.
No. XXX.—Administration Report of the Municipal Council of Kandy for 1902.
No. XXXI.—Administration Report of the Municipal Council of Galle for 1902.

The Ceylon Administration Reports for 1902.
Report and Estimate of Cost for providing a Water Supply for Mannar.
Return of Work done by Village Committees during 1902.
Numerical Abstract showing the Number of Persons in the several Provinces in the Island liable to perform Labour during 1903.
Return of Cooly Labourers on Estates during 1902.
Return under the Waste Lands Ordinance for 1902.
Accounts of Road Committees for 1902.
Rules under "The Irrigation and Paddy Cultivation Ordinance, 1889," for the Irrigation Districts of the Northern Province.
Rule regarding the Free Transmission of Telegrams.
Rules under "The Village Communities' Ordinance, 1889," for the District of Kegalla.
Rules under "The Village Communities' Ordinance, 1889," for Wellabada pattu of the Matara District.
Rules under "The Butchers' Ordinance, 1893," for the Ragalla Slaughter-house.
Rules governing the grant of Pensions, &c., to Road Committee Officers.
Rules governing the grant of Pensions, &c., to the Officers of the Local Board of Kalutara.
Regulations under "The Rabies Ordinance, 1893," for the town of Negombo.
Regulations under "The Insect Pest and Quarantine Ordinance, 1901."
Regulations under Ordinance No. 7 of 1902.
Rules under "The Irrigation and Paddy Cultivation Ordinance, 1889," for the Pomparippu pattu of the Puttalam District.
Rule under "The Museum Ordinance, 1873."
Port Rules under "The Masters Attendant's Ordinance, 1865," for the Ports of Colombo, Galle, Jaffna, Point Pedro, Valvettitturai, Kankesanturai, Mannar, Pesalai, Mullaittivu, and Batticaloa.
Rules under "The Dog Registration Ordinance, 1901," for Panadure, Horana, Tebuwana, and Trincomalee.
Regulation under "The Poisons Ordinance, 1901."
Rule under "The Notaries' Ordinance, 1900."
Rules under the Municipal Councils' Ordinance, No. 8 of 1901.

MOTIONS.

11. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That the following sums be charged to the loan of £1,400,000 sterling raised under Ordinance No. 14 of 1900, or to other loans to be raised for the purpose, viz.:—

	Rs.
Cost of materials for erecting four married quarters for the Malay police guard stationed at Mahara	3,730
Cost of altering the position of moorings in the Colombo Harbour ...	2,000
Cost of materials for improving the latrines of the Mahara prison ...	154
Cost of platforms to latrines at the Mutwal prison	360

The motion was agreed to.

12. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That a sum not exceeding Rs. 36,000 be advanced to the Board of Improvement, Nuwara Eliya, for providing a town hall and assembly rooms for that town, to be repaid by a sinking fund of one per cent. per annum, with interest at four per cent. per annum.

The motion was agreed to.

13. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That a sum not exceeding Rs. 20,000 be advanced to the Local Board of Kurunegala, for the construction of a market in the town of Kurunegala, to be repaid in fifteen annual instalments, with interest at four per cent. per annum.

The motion was agreed to.

14. Pursuant to notice, the Lieutenant-Governor, seconded by the Attorney-General, moved—That the Treasurer be authorized to advance to the Local Board of Gampola, for the purpose of providing an efficient water supply for the town of Gampola, a sum of Rs. 25,000, repayable in ten years by half-yearly instalments, with interest at the rate of four per cent. per annum.

The motion was agreed to.

15. Pursuant to notice, the Lieutenant-Governor, seconded by the Attorney-General, moved—That a sum of Rs. 120,000 be provided for the purpose of creating at Nuwara Eliya a sanitarium for the troops serving in Ceylon and a residence for the General Officer Commanding the Troops, in place of his present quarters, which would be utilized for the purpose of the sanitarium.

The motion was agreed to.

BILLS.

16. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to Incorporate the Committee of the Institution known as the Victoria Home for Incurables" was read a first time, and the second reading was fixed for the next Meeting of Council.

17. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to regulate the use of Wireless Telegraphy in Ceylon" was read a first time, and the second reading was fixed for the next Meeting of Council.

18. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to amend 'The Public Officers' Security Ordinance, 1890,'" was read a first time, and the second reading was fixed for the next Meeting of Council.

19. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to amend the Ceylon Penal Code" was read a first time, and the second reading was fixed for the next Meeting of Council.

20. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to provide for the Surrender of Fugitive Criminals from the Federated Malay States" was read a first time, and the second reading was fixed for the next Meeting of Council.

21. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to amend 'The Opium Ordinance, 1899,'" was read a first time, and the second reading was fixed for the next Meeting of Council.

22. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to give effect to an Order of His Majesty in Council known as 'The Foreign Marriages Order in Council, 1903,'" was read a first time, and the second reading was fixed for the next Meeting of Council.

23. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to further amend 'The Ceylon Paper Currency Ordinance, 1884,'" was read a second time, and the Council went into Committee thereon. The Bill having been reported as passed in Committee, the Standing Orders were suspended, and the Bill was, on the motion of the Attorney-General, seconded by the Treasurer, read a third time and passed.

24. On the motion of the Lieutenant-Governor, seconded by the Treasurer, the Bill intituled "An Ordinance for making provision for the Contingent Services for the year 1904" was read a second time, and the Council went into Committee thereon. The Bill was referred to a Sub-Committee consisting of the Lieutenant-Governor, the Auditor-General, the Treasurer, the Government Agent, Western Province, the Hon. Mr. H. L. Crawford, the Hon. Mr. W. G. Rockwood, the Hon. Mr. S. C. Obeyesekere, the Hon. Mr. F. C. Loos, the Hon. Mr. W. H. Figg, and the Hon. Mr. E. Rosling.

ADJOURNMENT.

25. On the motion of the Lieutenant-Governor, the Council was on its rising adjourned till Tuesday, November 10, 1903, at 3 P.M.

TUESDAY, NOVEMBER 10, 1903.

PRESENT.

His Excellency the Right Hon. Sir J. WEST RIDGEWAY, G.C.M.G., K.C.B., K.C.S.I., *President*.

The Hon. Mr. E. F. IM THURN, C.B., C.M.G.
The Hon. Brigadier-General G. L. C. MONEY, C.B., D.S.O., A.D.C.
The Hon. Mr. A. G. LASCELLES, K.C.
The Hon. Mr. F. R. ELLIS, C.M.G.
The Hon. Mr. H. H. CAMERON.
The Hon. Mr. G. M. FOWLER.
The Hon. Mr. S. HAUGHTON.
The Hon. Mr. H. L. CRAWFORD.
The Hon. Mr. H. L. MOYSEY, I.S.O.
The Hon. Mr. W. G. ROCKWOOD, M.D.
The Hon. Mr. S. N. W. HULUGALLE.
The Hon. Mr. F. C. LOOS.
The Hon. Mr. W. M. ABDUL RAHIMAN.
The Hon. Mr. W. H. FIGG.
The Hon. Mr. E. ROSLING.
The Hon. Mr. GILES F. WALKER.

1. The Council met pursuant to adjournment. The Lieutenant-Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.

PAPERS.

3. The following Papers were laid on the table :—

Administration of the Affairs of Ceylon, 1896 to 1903.
Report on the Financial Affairs of Ceylon, 1896 to 1902.
Maps of Ceylon.

MOTION.

4. Pursuant to notice, the Treasurer, on behalf of the Lieutenant-Governor, seconded by the Attorney-General, moved—That a sum not exceeding Rs. 14,000 be advanced to the Committee of the Colombo Pettah Library, for the purpose of erecting a building to be used as a library, to be repaid by a sinking fund of one per cent. per annum, with interest at the rate of three and a half per cent. per annum.

The motion was agreed to.

COMMITTEE.

5. The Attorney-General brought up the report of the Committee appointed to frame a Farewell Address to His Excellency Sir West Ridgeway, and moved that it be read by the Clerk. The draft Address having been read, the Attorney-General, seconded by the Hon. Mr. W. G. Rockwood, moved that it be adopted.

The motion was agreed to.

6. His Excellency the Governor having arrived took the Chair.

7. The Hon. Mr. W. G. Rockwood read the following Farewell Address to His Excellency the Governor:—

MAY IT PLEASE YOUR EXCELLENCY,

On the eve of your departure from the Island the Legislative Council desires to express its sense of the great services rendered by Your Excellency during your tenure of office for the past eight years.

Among the many works undertaken or inaugurated by Your Excellency are the improvements at the port of Colombo, the impulse given to sanitation through loans to Local Boards, the duplication of the pipes for the Colombo water supply, the scheme for the drainage of Colombo, the successful working of the Plague Committee, the comprehensive scheme of Railway Extensions and the introduction of the narrow gauge, the creation of a separate Irrigation Department, the encouragement given to the Volunteer movement, the assistance to agriculture through a staff of scientific advisers and the establishment of an Experimental Station at Peradeniya, the great advance made in the work of the Survey Department, and the very successful control and management of the Prisoners of War. These are among the works which have benefited and will yet benefit the Colony, and which will stand out as imperishable memorials of Your Excellency's wise and just Administration.

Your Excellency has spared no pains in undertaking and carrying out measures for developing the resources of the Island, for benefiting its various interests, and for promoting its moral and material advancement, and the Council recognizes with the utmost satisfaction the comprehensive and statesmanlike view that Your Excellency has invariably taken of all measures that have come before you, and the readiness with which you have given a full and impartial consideration to the views of all classes alike.

In conclusion, we wish to place on record our appreciation of Your Excellency's able conduct of the business of the Council as its President. At no previous time has its work been done so expeditiously or with so little friction, and we record with pleasure that on no single occasion under Your Excellency's administration have the Official Members of Council been restricted in the freedom of their votes.

The Council views Your Excellency's departure and bids you farewell with deep regret, and humbly and sincerely wishes Your Excellency all happiness and prosperity in the future.

8. His Excellency the Governor replied as follows:—

HONOURABLE GENTLEMEN OF THE LEGISLATIVE COUNCIL,

I AM profoundly touched by this gracious and eloquent Address which you have just presented to me, and I assure you I shall ever guard and treasure it as evidence of the appreciation which my efforts to perform my duty have met at the hands of my friends and colleagues in this Council. In the Address you have stated the various measures and works which have been undertaken with your co-operation during my term of office, and which I fervently hope will conduce to the prosperity and welfare of this Colony.

I do not mean this afternoon to attempt the task of reviewing the administration during the last eight years. I have done that as concisely and precisely as I can in the minute—the very lengthy minute I fear—which has been placed on the table to-day, and which is entitled "A Review of the Administration of the Affairs of Ceylon from 1896 to 1903." That review will enable you to judge of the situation, and I think after reading it you will come to the conclusion that the progress which has been made by this Colony during my term of office has been remarkable, and that its prosperity is continually and steadily advancing. I have not attempted in this review to set myself the impossible task of proving that my administration has been faultless and unmarred by mistakes; but I have tried, and I hope successfully, to show that I have made some use of the opportunities that have been placed at my disposal, and that I have succeeded to some extent in developing the resources of the Colony in profitably investing its revenues and improving and developing the machinery of the Government. It is difficult to perform a duty like this without the appearance of boasting and self-glorification, but although some license in this respect is allowed to the veteran who puts off his armour, I feel sure you, Gentlemen, will acquit me of any unworthy motive, and will not suppose me to be actuated by any spirit of egotism or rivalry in trying to prove that I have not been an unfaithful servant. If I have succeeded in emulating the vigour and efficiency of my predecessors, and if I have succeeded in leaving for the guidance of my successor a clear statement of the affairs of the Colony, and in showing what has been done, and consequently what remains to be done, then I shall have achieved my object.

Of course, the most important subject we have to deal with is the financial position of the Colony. I have tried to place that position before you as clearly as I possibly can. Finance, Gentlemen, is the keystone of our prosperity. It is the foundation of our administration, and unless that stone be well and truly laid, the superstructure, however imposing it may be, will certainly fall and subside in the time of storm and stress. But I hope I have succeeded in this Review in showing you that the future of this Island rests on the bedrock of sound finance. I will not on this occasion go into any details on this subject, but I may remark that your revenues have increased by 23 per cent. during my term of office. It is true your expenditure has proportionately increased, but I hope that I have shown that the expenditure has been judicious and on lines which will conduce to the prosperity and the welfare of the Colony. Each Department in this Review is fully dealt with, its history and the work it has done, and I think you will find in the case of each Department that its machinery has been improved and its efficiency has been enhanced.

To-day there is on this table ocular and tangible evidence of the good work done by one of these Departments—the Survey Department. There has been placed here—for the first time in the history of Ceylon—a complete and accurate map of the Island. When I came here I was astonished to find that there was no such map, that the only map of Ceylon was full of gross inaccuracies and was entirely unreliable. Since that time the Topographical branch of the Survey Department has devoted its energies to making this map, and I now have the pleasure of handing it to you. That I am in a position to do so before I hand over the reins of office is due to the strenuous exertions of that Department so ably directed by its chief, Mr. Grinlinton.

There is one matter which I have dealt with at more than usual length in my Review, and that is crime. You know this is a subject which has caused me constant anxiety since I assumed the reins of office. I think I may claim to have achieved some success. There is no doubt that the machinery for reporting crime is remarkably improved, and I think it is generally admitted that very few cases are now compromised. As regards ordinary crime, the condition of this Colony is satisfactory, but unfortunately the prevalence amongst the Sinhalese of personal assaults, grave personal assaults, amongst themselves—amongst themselves, Gentlemen—remains the great problem of the criminal administration of this Colony. But you must not hastily condemn 3¼ millions of people because of the sins of the comparatively few. I say, notwithstanding that, the moral condition of the people of this Colony is good. They are quiet, gentle, and tractable, and charitable to a degree which would be considered Utopian in Europe. Out of Colombo there is no necessity for a poor house or any other form of poor relief. Destitution, poverty, there may be, but no starvation. Private charity and neighbourly kindness do the blessed work of relief quietly and effectually. There is still, of course, much to be done, and much may be done by rigorous prosecution and prompt punishment, but I do not think you can expect any radical improvement until education has made its mark upon the rising generation.

As I have said, I shall attempt no summary of this Review. To do so would detain you here inconveniently and unnecessarily long. These questions—these important questions—can be much better dealt with at your leisure in the quiet of your libraries. Therefore, suffice it for me to say that I leave the Colony in a highly prosperous condition. Its revenues are flourishing, its trade is thriving, its population is increasing, and on every side there are signs of increased and diffused wealth, especially amongst the native population. All our official returns—the Savings Banks, the Railway, the Customs House—all our returns give the same evidence, and that I consider, Gentlemen, is a satisfactory state of things, and especially the adoption of a higher standard of living amongst the masses. All this ought to convince the most glocmy pessimist.

And now, Gentlemen, in wishing you farewell let me quote the concluding words of this Review. Let me express the hope that you will be satisfied that the golden opportunities that I have enjoyed have not been wasted or frittered away; but, whatever your verdict may be, my conscience assures me that I have tried to do my duty, that I have placed unremittingly and unstintingly at the service of the Colony such ability and such energy as I possess. For any success that has been achieved I am indebted to the advice and assistance which I have received from my colleagues in the Executive Council, to the zealous and loyal co-operation of the Public Service of all branches, and last, but not least, to you, Gentlemen—the Unofficial Members of this Council—you who so patriotically place at the disposal of the Colony so much of your valuable time and labour without compensation or remuneration. I deeply regret the severance of our official association, which has been so edifying and pleasant, and there has been no tribute which has been rendered—or can be rendered—which is more pleasing to me than that which is contained in this Address, especially when you say that "at no previous time has its work been done so expeditiously or with so little friction, and we record with pleasure that on no single occasion under Your Excellency's administration have the Official Members of Council been restricted in the freedom of their votes."

It is hard to realize, Gentlemen, that this is the last time I shall sit in this chair, the last time I shall preside over this Council. I do not realize it, and it is perhaps just as well that I do not realize it, as I could not command that outer calmness in addressing you to-day which befits the occasion; but in future years it will be a great consolation to me to remember that no fleeting cloud has ever darkened our relations, no note of discord has ever disturbed the harmony of our proceedings, and no misunderstanding has ever interfered with the transaction of public business. For that happy result we are indebted to this, that we were mutually convinced that we had the same object in view, viz., the welfare and the prosperity of this Colony, that we have been steadfastly making for the same goal, although occasionally some of us may have differed as to the best and shortest road by which to travel.

When I first met you, Gentlemen, I told you I should be always ready to hear—nay, invite—the expression of your views and opinions, and give them most careful attention. Well, I think I have redeemed that pledge. Indeed, you give me assurance to that effect in this Address. Never have I persisted in any legislative or any administrative measure against your collective opinion. Your views have had the same weight, your opinions have commanded the same deference, as if the existence of the Government depended on your vote. I came here from the Loyal Isle of Home Rule, where the Governor commands no official majority in the Legislature, where he has to depend upon persuasion, argument, conciliation, and compromise in order to obtain votes to pass his measures through the Legislature and obtain the necessary supplies. That training has been useful to me here, and I have always tried to ignore, if I have not forgotten, the fact that I command an official majority

wherewith to enforce my views. And as you pointed out, Gentlemen, in your Address, I have never availed myself of the official vote, buf I have preferred and expressly preferred to attain my end by appealing to your reason and good feeling, and also by subordinating my own views and opinions to yours when this could be done without danger to the public interests. The records of this Council will show that the opinion of the Unofficial Members has often prevailed, that more than once Bills have been withdrawn, and frequently Bills have been rigorously and substantially amended, in accordance with the wishes of the Unofficial Members. Some may blame me for granting so many concessions, but I do not agree with my critics. I think that the pulse of the public should be felt and its temperature should be tested. Even a useful and patent medicine may do harm if the patient is not prepared and ready for its assimilation, and even a desirable law may be mischievous if it is inopportune or too far in advance of public opinion.

I think, Gentlemen, under the existing constitution you practically enjoy all the advantages of a self-governing Colony. You have got complete command over the finances. No law can be passed without your concurrence, and I do not believe that any wise Government would be deaf to your remonstrances. Gentlemen, when on assuming office I first addressed you I promised to hold the scales of my administration equally balanced, equally to guard the interests, and equally to promote the welfare of all classes of His Majesty's subjects, whatever their race and whatever their creed. Have I redeemed this pledge? If I have failed to do so, I have failed in the most essential and vital duty which devolves upon the King's representative in an Eastern country. But the still small voice of conscience assures me, for I know, whatever has been the outcome, that it has been my unswerving aim, my inflexible intention, to be true to the dignity of my office as His Majesty's representative, and to rise above the mists of bias and prejudice, more especially of racial bias and prejudice. And now that on the eve of the surrender of my high office I religiously examine and analyze my conscience, I can truly say that never have I consciously permitted any racial bias or prejudice to influence or interfere with my treatment of any man or question.

In conclusion, Gentlemen, let me again express my deep and sincere regret at the close of my administration and at my approaching departure from this beautiful Island, where I have spent eight happy—and, I hope, useful—years of my life, and let me assure you that so long as I live I shall be a most interested, attentive, and sympathetic observer of your destinies, and if ever the opportunity presents itself to me—for which I shall eagerly watch and as eagerly seize—of in any way serving the interests of this country, which I have learnt to love so well, most promptly and effectually will that opportunity be seized. That God's blessing may rest on this Island is, and ever will be, my fervent prayer.

ADJOURNMENT.

9. On the motion of the Auditor-General, the Council was on its rising adjourned till Friday, November 20, 1903, at 2.30 P.M.

FRIDAY, NOVEMBER 20, 1903.

PRESENT:

His Excellency E. F. IM THURN, Esq., C.B., C.M.G., *President*.

The Hon. Mr. F. R. ELLIS, C.M.G.
The Hon. Brigadier-General G. L. C. MONEY, C.B., D.S.O., A.D.C.
The Hon. Mr. A. G. LASCELLES, K.C.
The Hon. Mr. H. H. CAMERON.
The Hon. Mr. G. M. FOWLER.
The Hon. Mr. S. HAUGHTON.
The Hon. Mr. H. L. CRAWFORD.
The Hon. Mr. H. L. MOYSEY, I.S.O.
The Hon. Mr. W. G. ROCKWOOD, M.D.
The Hon. Mr. S. N. W. HULUGALLE.
The Hon. Mr. F. C. LOOS.
The Hon. Mr. W. M. ABDUL RAHIMAN.
The Hon. Mr. W. H. FIGG.
The Hon. Mr. E. ROSLING.
The Hon. Mr. GILES F. WALKER.

1. The Council met pursuant to adjournment. The Lieutenant-Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.

PETITION.

3. The Hon. Mr. F. C. Loos presented a petition from the inhabitants of Haldummulla, Province of Uva, asking for the establishment of a court in that district.

ASSENT TO BILLS.

4. The Colonial Secretary announced that His Excellency the Governor had given his assent to Ordinance No. 6 of 1903, intituled "An Ordinance to further amend 'The Ceylon Paper Currency Ordinance, 1884.'"

PAPERS.

5. The Colonial Secretary laid on the table the following Papers:—

Sessional Papers, 1903:—

No. XXXIII.—Report on Gold Prospecting in Ceylon.
No. XXXIV.—Reports on the Pearl Fishery of 1903.
No. XXXV.—Papers relating to the Cost of Construction of the Kelani Valley Railway.

Statement showing the amount of Schedule Fees recovered by Fiscals during 1902.

By-laws framed under section 5 of Ordinance No. 25 of 1901 for the towns of Bandarawela, Haputale, Koslanda, and Passara.

Despatch from the Secretary of State No. 393 of 23rd October, 1903, stating that the invitation to the British Association for the Advancement of Science to hold its annual meeting during 1907 or 1908 in Ceylon was duly forwarded to the General Secretaries of the Association on the 18th August last.

ADDRESS TO SIR HENRY BLAKE.

6. The Treasurer, with the consent of the Council, moved—That an Address of Welcome be presented to Sir Henry and Lady Blake. The motion was seconded by the Attorney-General and agreed to. The following Members were appointed a Sub-Committee to prepare the Address: The Colonial Secretary, the Attorney-General, the Hon. Mr. H. L. Crawford, the Hon. Mr. S. C. Obeyesekere, the Hon. Mr. W. M. Abdul Rahiman, the Hon. Mr. W. H. Figg, and the Hon. Mr. Giles F. Walker.

NOTICE OF MOTION.

7. The Hon. Mr. S. N. W. Hulugalle gave notice that at the next Meeting of Council he would move—That Government be asked to give favourable consideration to the report of Mr. Oertel of the Indian Public Works Department (*vide* Sessional Paper XX. of 1903) on the subject of restoring Abhayagiri Dagoba at Anuradhapura, with a view to preserve one of the largest ancient structures that contribute to promote the archæological interests in the Island.

MOTIONS.

8. Pursuant to notice, the Colonial Secretary, seconded by the Treasurer, moved—That a sum not exceeding Rs. 11,500 be advanced to the Local Board of Hatton-Dikoya, for the purpose of building markets and slaughter-houses and for completing the improved system of drainage, to be repaid in twenty half-yearly equal payments, with interest at the rate of four per cent. per annum.

The motion was agreed to.

9. Pursuant to notice, the Colonial Secretary, seconded by the Treasurer, moved—That a sum not exceeding Rs. 3,000 be advanced to the Village Committee of West Giruwa pattu, for the purpose of building public markets, to be repaid in five equal instalments, to be made once every six months, with interest at three and a half per cent. per annum.

The motion was agreed to.

BILLS.

10. On the motion of the Colonial Secretary, seconded by the Attorney-General, the Bill intituled "An Ordinance for making provision for the Supplementary Contingent Charges for the year 1903" was read a first time, and the second reading was fixed for the next Meeting of Council.

11. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to Incorporate the Committee of the Institution known as the Victoria Home for Incurables" was read a second time, and the Council went into Committee thereon. The Bill having been reported as amended in Committee was referred to the Law Officers of the Crown for report.

12. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to regulate the use of Wireless Telegraphy in Ceylon" was read a second time, and the Council went into Committee thereon. The Bill having been reported as passed in Committee was referred to the Law Officers of the Crown for report.

13. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to amend 'The Public Officers' Security Ordinance, 1890,'" was read a second time, and the Council went into Committee thereon. The Bill having been reported as passed in Committee was referred to the Law Officers of the Crown for report.

14. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to amend the Ceylon Penal Code" was read a second time, and the Council went into Committee thereon. The Bill having been reported as passed in Committee was referred to the Law Officers of the Crown for report.

15. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to provide for the Surrender of Fugitive Criminals from the Federated Malay States" was read a second time, and the Council went into Committee thereon. The Bill having been reported as passed in Committee was referred to the Law Officers of the Crown for report.

16. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to amend 'The Opium Ordinance, 1899,'" was read a second time, and the Council having gone into Committee thereon it was referred to a Sub-Committee consisting of the Attorney-General, the Government Agent, Western Province, the Hon. Mr. H. L. Crawford, the Hon. Mr. F. C. Loos, and the Hon. Mr. W. M. Abdul Rahiman.

ADJOURNMENT.

17. On the motion of the Colonial Secretary, the Council was on its rising adjourned till Wednesday, the 25th November, 1903, at 2.30 P.M.

WEDNESDAY, NOVEMBER 25, 1903.

PRESENT:

His Excellency E. F. IM THURN, Esq., C.B., C.M.G., *President.*

The Hon. Mr. F. R. ELLIS, C.M.G.
The Hon. Brigadier-General G. L. C. MONEY, C.B., D.S.O., A.D.C.
The Hon. Mr. A. G. LASCELLES, K.C.
The Hon. Mr. H. H. CAMERON.
The Hon. Mr. G. M. FOWLER.
The Hon. Mr. H. L. CRAWFORD.
The Hon. Mr. H. L. MOYSEY, I.S.O.
The Hon. Mr. W. G. ROCKWOOD, M.D.
The Hon. Mr. S. C. OBEYESEKERE.
The Hon. Mr. S. N. W. HULUGALLE.
The Hon. Mr. W. M. ABDUL RAHIMAN.
The Hon. Mr. W. H. FIGG.
The Hon. Mr. E. ROSLING.
The Hon. Mr. GILES F. WALKER.

1. The Council met pursuant to adjournment. The Lieutenant-Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.

PAPERS.

3. The Colonial Secretary laid on the table the following Papers:—

Amendment to the General Rules for Prisons made by the Governor, acting with the advice of the Executive Council, under section 76 of "The Prisons Ordinance, 1877."

Notification of amendment of Pension Minute, dated 24th January, 1903, by repeal of part III. of section 8.

MOTIONS.

4. The Treasurer brought up the draft of the Address to be presented to Sir Henry Blake, and moved that it be read by the Clerk. The Address was read, and is as follows:—

MAY IT PLEASE YOUR EXCELLENCY,

We, the Members of the Legislative Council of Ceylon, beg leave to tender to Your Excellency and to Lady Blake our loyal and hearty welcome, together with our respectful congratulations on Your Excellency's appointment as Governor of this Island.

We gladly assure Your Excellency of our desire to co-operate most cordially with you in all measures having for their end the welfare of the people of this country, and the advancement of the Colony, and we venture to express the hope that Your Excellency's term of office here may be as prosperous as that of your illustrious predecessor.

On the motion of the Treasurer, seconded by the Attorney-General, the Address was adopted.

5. Pursuant to notice, the Hon. Mr. S. N. W. Hulugalle, seconded by the Hon. Mr. S. C. Obeyesekere, moved—That Government be asked to give favourable consideration to the report of Mr. Oertel of the Indian Public Works Department (*vide* Sessional Paper XX. of 1903) on the subject of restoring Abhayagiri Dagoba at Anuradhapura, with a view to preserve one of the largest ancient structures that contribute to promote the archæological interests in the Island.

The motion was amended by the omission of the word "favourable."

The motion as amended was agreed to.

BILLS.

6. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to prevent the removal of Sand, Stone, and other Substances from the Seashore in certain cases" was read a first time, and the second reading was fixed for the next Meeting of Council.

7. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to make provision for giving effect in Ceylon to a Convention signed the Fifth day of March, 1902, in relation to Sugar," was read a first time, and the second reading was fixed for the next Meeting of Council.

8. The Clerk to the Council having read the report of the Law Officers of the Crown, dated 24th November, 1903, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance to Incorporate the Committee of the Institution known as the Victoria Home for Incurables" was, on the motion of the Attorney-General, seconded by the Treasurer, read a third time and passed.

9. The Clerk to the Council having read the report of the Law Officers of the Crown, dated 24th November, 1903, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance to regulate the use of Wireless Telegraphy in Ceylon" was, on the motion of the Attorney-General, seconded by the Treasurer, read a third time and passed.

10. The Clerk to the Council having read the report of the Law Officers of the Crown, dated 24th November, 1903, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance to amend 'The Public Officers' Security Ordinance, 1890,'" was, on the motion of the Attorney-General, seconded by the Treasurer, read a third time and passed.

11. The Clerk to the Council having read the report of the Law Officers of the Crown, dated 24th November, 1903, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance to amend the Ceylon Penal Code" was, on the motion of the Attorney-General, seconded by the Treasurer, read a third time and passed.

12. The Clerk to the Council having read the report of the Law Officers of the Crown, dated 24th November, 1903, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance to provide for the Surrender of Fugitive Criminals from the Federated Malay States" was, on the motion of the Attorney-General, seconded by the Treasurer, read a third time and passed.

13. On the motion of the Colonial Secretary, seconded by the Treasurer, the Council went into Committee on the Bill intituled "An Ordinance for making provision for the Contingent Services for the year 1904," and the Colonial Secretary brought up the report of the Sub-Committee, which was read by the Clerk of the Council. The Bill having been reported as amended in Committee was referred to the Law Officers of the Crown for report.

14. On the motion of the Colonial Secretary, seconded by the Treasurer, the Bill intituled "An Ordinance for making provision for the Supplementary Contingent Charges for the year 1903" was read a second time, and the Council went into Committee thereon. In Committee the Bill was referred to a Sub-Committee consisting of the Colonial Secretary, the Treasurer, the Government Agent, Western Province, the Hon. Mr. H. L. Crawford, the Hon. Mr. H. L. Moysey, the Hon. Mr. W. G. Rockwood, the Hon. Mr. S. C. Obeyesekere, the Hon. Mr. F. C. Loos, the Hon. Mr. W. H. Figg, and the Hon. Mr. E. Rosling.

15. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to give effect to an Order of His Majesty in Council known as 'The Foreign Marriages Order in Council, 1903,'" was read a second time, and the Council went into Committee thereon. The Bill having been reported as passed in Committee was referred to the Law Officers of the Crown for report.

ADJOURNMENT.

16. On the motion of the Colonial Secretary, the Council was on its rising adjourned till Wednesday, December 2, 1903, at 2.30 P.M.

WEDNESDAY, DECEMBER 2, 1903.

PRESENT:

His Excellency E. F. IM THURN, Esq., C.B., C.M.G., *President*.

The Hon. Mr. F. R. ELLIS, C.M.G.
The Hon. Brigadier-General G. L. C. MONEY, C.B., D.S.O., A.D.C.
The Hon. Mr. A. G. LASCELLES, K.C.
The Hon. Mr. H. H. CAMERON.
The Hon. Mr. G. M. FOWLER.
The Hon. Mr. S. HAUGHTON.
The Hon. Mr. H. L. CRAWFORD.
The Hon. Mr. H. L. MOYSEY, I.S.O.
The Hon. Mr. W. G. ROCKWOOD, M.D.
The Hon. Mr. S. C. OBEYESEKERE.
The Hon. Mr. S. N. W. HULUGALLE.
The Hon. Mr. F. C. LOOS.
The Hon. Mr. W. M. ABDUL RAHIMAN.
The Hon. Mr. W. H. FIGG.
The Hon. Mr. E. ROSLING.
The Hon. Mr. GILES F. WALKER.

1. The Council met pursuant to adjournment. His Excellency the Lieutenant-Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.

PETITIONS.

3. The Hon. Mr. S. C. Obeyesekere presented a petition from landowners of Kollupitiya and others objecting to the proposed Ordinance to prevent the removal of sand, stone, and other substances from the seashore in certain cases.

PAPERS.

4. The Colonial Secretary laid on the table the following Papers:—

Amendment of Rule 11 of the Rules relating to the grant of Pensions to Officers of the Colombo Municipal Council.

Rules framed by the several Village Committees in the Kalutara District of the Western Province, under section 16 of the Village Communities' Ordinance, No. 24 of 1889.

Rules for the Ports of Batticaloa and Trincomalee framed under "The Masters Attendant's Ordinance, 1865."

ORDINANCES ASSENTED TO.

5. The Colonial Secretary announced that His Excellency the Lieutenant-Governor had given his assent to the following Ordinances :—

Ordinance No. 7 of 1903, intituled "An Ordinance to Incorporate the Committee of the Institution known as the Victoria Home for Incurables."

Ordinance No. 8 of 1903, intituled "An Ordinance to regulate the use of Wireless Telegraphy in Ceylon."

Ordinance No. 9 of 1903, intituled "An Ordinance to amend 'The Public Officers' Security Ordinance, 1890.'"

Ordinance No. 10 of 1903, intituled "An Ordinance to amend the Ceylon Penal Code."

Ordinance No. 11 of 1903, intituled "An Ordinance to provide for the Surrender of Fugitive Criminals from the Federated Malay States."

MOTIONS.

6. Pursuant to notice, the Colonial Secretary, seconded by the Treasurer, moved—That from and after the First day of January, 1904, tolls be established on the following minor roads in the North-Western Province, namely :—

(1) On the District Road Committee road from Panala to Kuliyapitiya.
(2) On the District Road Committee road from Kadahapola to Rambawewa.

The motion was agreed to.

7. Pursuant to notice, the Colonial Secretary, seconded by the Treasurer, moved—That from and after the First day of January, 1904, a toll be established on the minor road from Arambakada to Bokkawala in the Katugastota district of the Central Province.

The motion was agreed to.

8. Pursuant to notice, the Colonial Secretary, seconded by the Attorney-General, moved—That the following sums be charged to the loan of £1,400,000 sterling raised under Ordinance No. 14 of 1900, or to other loans to be raised for the purpose, viz.:—

	Rs.
Cost of gravelling roads in prison and connected buildings, Mutwal ...	760
Cost of building quarters for twelve married officers, Mahara ...	3,500
Cost of building a new system of cement drains round the officers' quarters, Mahara	650

The motion was agreed to.

BILLS.

9. On the motion of the Colonial Secretary, seconded by the Attorney-General, the Bill intituled "An Ordinance for making final provision for the Supplementary Contingent Charges for the year 1902" was read a first time, and the second reading was fixed for the next Meeting of Council.

10. The Clerk to the Council having read the report of the Law Officers of the Crown, dated 28th November, 1903, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance to give effect to an Order of His Majesty in Council known as 'The Foreign Marriages Order in Council, 1903,'" was, on the motion of the Attorney-General, seconded by the Treasurer, read a third time and passed.

11. The Clerk to the Council having read the report of the Law Officers of the Crown, dated 28th November, 1903, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance for making provision for the Contingent Services for the year 1904" was, on the motion of the Colonial Secretary, seconded by the Attorney-General, read a third time and passed.

12. On the motion of the Attorney-General, seconded by the Treasurer, the Council went into Committee on the Bill intituled "An Ordinance to amend 'The Opium Ordinance, 1899,'" and the Attorney-General brought up the report of the Sub-Committee, which was read by the Clerk of the Council. The Bill having been reported as amended in Committee was referred to the Law Officers of the Crown for report.

13. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to prevent the removal of Sand, Stone, and other Substances from the Seashore in certain cases" was read a second time, and the Council went into Committee thereon. In Committee the Bill was referred to a Sub-Committee consisting of the Attorney-General, the Government Agent, Western Province, the Hon. Mr. H. L. Crawford, the Hon. Mr. S. C. Obeyesekere, and the Hon. Mr. F. C. Loos.

14. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to make provision for giving effect in Ceylon to a Convention signed the Fifth day of March, 1902, in relation to Sugar," was read a second time, and the Council went into Committee thereon. The Bill having been reported as passed in Committee was referred to the Law Officers of the Crown for report.

ADJOURNMENT.

15. On the motion of the Colonial Secretary, the Council was on its rising adjourned till Wednesday, December 9, 1903, at 2.30 P.M.

WEDNESDAY, DECEMBER 9, 1903.

PRESENT:

His Excellency Sir HENRY A. BLAKE, G.C.M.G., *President.*

The Hon. Mr. E. F. IM THURN, C.B., C.M.G.
The Hon. Brigadier-General G. L. C. MONEY, C.B., D.S.O., A.D.C.
The Hon. Mr. F. R. ELLIS, C.M.G.
The Hon. Mr. A. G. LASCELLES, K.C.
The Hon. Mr. H. H. CAMERON.
The Hon. Mr. G. M. FOWLER.
The Hon. Mr. H. L. CRAWFORD.
The Hon. Mr. H. L. MOYSEY, I.S.O.
The Hon. Mr. W. G. ROCKWOOD, M.D.
The Hon. Mr. S. C. OBEYESEKERE.
The Hon. Mr. S. N. W. HULUGALLE.
The Hon. Mr. F. C. LOOS.
The Hon. Mr. W. M. ABDUL RAHIMAN.
The Hon. Mr. W. H. FIGG.
The Hon. Mr. E. ROSLING.
The Hon. Mr. GILES F. WALKER.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.

PAPERS.

3. The Lieutenant-Governor laid on the table the following papers:—

Regulations made under Ordinance No. 9 of 1893 for the Local Board of Negombo.

Despatch from the Secretary of State dated November 11, 1903, enclosing the reply received from the Council of the British Association for the Advancement of Science to the invitation of this Government to hold their annual meeting in 1907 or 1908 in Ceylon.

QUESTION.

4. Pursuant to notice, the Hon. Mr. F. C. Loos asked—What is the result of the recommendation made by the Government to the Secretary of State for placing the Widows' and Orphans' Pension Fund upon a fair and more equitable basis than at present exists.

The Treasurer replied.

MOTION.

5. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That the following sum be charged to the vote of £1,400,000 sterling raised under Ordinance No. 14 of 1900, or to other loans to be raised for the purpose, viz.:—

	Rs.
Cost of constructing an open iron shed, a roadway, and covered drain in the Customs premises	23,156

The motion was agreed to.

BILLS.

6. The Clerk to the Council having read the report of the Law Officers of the Crown, dated 3rd December, 1903, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance to amend 'The Opium Ordinance, 1899,'" was, on the motion of the Attorney-General, seconded by the Treasurer, read a third time and passed.

7. The Clerk to the Council having read the report of the Law Officers of the Crown, dated 3rd December, 1903, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance to make provision for giving effect in Ceylon to a Convention signed the Fifth day of March, 1902, in relation to Sugar," was, on the motion of the Attorney-General, seconded by the Treasurer, read a third time and passed.

8. On the motion of the Lieutenant-Governor, seconded by the Treasurer, the Council went into Committee on the Bill intituled "An Ordinance for making provision for the Supplementary Contingent Charges for the year 1903," and the Lieutenant-Governor brought up the report of the Sub-Committee, which was taken as read. The Bill having been reported as amended in Committee the Standing Orders were suspended. The Clerk to the Council having read the report of the Law Officers of the Crown, dated 3rd December, 1903, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill was, on the motion of the Lieutenant-Governor, seconded by the Attorney-General, read a third time and passed.

9. On the motion of the Auditor-General, seconded by the Treasurer, the Bill intituled "An Ordinance for making final provision for the Supplementary Contingent Charges for the year 1902" was read a second time, and the Council went into Committee thereon. The Bill having been reported as passed in Committee was referred to the Law Officers of the Crown for report.

ADJOURNMENT.

10. On the motion of the Lieutenant-Governor, the Council was on its rising adjourned *sine die*.

WEDNESDAY, MARCH 16, 1904.

PRESENT:

His Excellency Sir HENRY A. BLAKE, G.C.M.G., *President.*

The Hon. Mr. E. F. IM THURN, C.B., C.M.G.
The Hon. Brigadier-General G. L. C. MONEY, C.B., D.S.O., A.D.C.
The Hon. Mr. A. G. LASCELLES, K.C.
The Hon. Mr. F. R. ELLIS, C.M.G.
The Hon. Mr. H. H. CAMERON.
The Hon. Mr. G. M. FOWLER.
The Hon. Mr. H. WACE, C.M.G.
The Hon. Mr. F. A. COOPER, C.M.G.
The Hon. Mr. W. H. JACKSON.
The Hon. Mr. W. G. ROCKWOOD, M.D.
The Hon. Mr. S. C. OBEYESEKERE.
The Hon. Mr. S. N. W. HULUGALLE.
The Hon. Mr. F. C. LOOS.
The Hon. Mr. W. M. ABDUL RAHIMAN.
The Hon. Mr. W. H. FIGG.
The Hon. Mr. W. D. GIBBON.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

OATH.

2. The Hon. Mr. W. D. Gibbon took his oath on taking his seat as Member of Council.

MINUTES.

3. The Minutes of the last Meeting were read and confirmed.

PETITION.

4. The Hon. Mr. S. N. W. Hulugalle presented a petition from certain inhabitants of the village Pebotuwa, in the District of Ratnapura, as to their claim to certain land.

PAPERS.

5. The Lieutenant-Governor laid on the table the following papers :—

Despatch from the Secretary of State No. 460, dated December 8, 1903, relative to an increase to the Governor's salary.

Despatch from the Secretary of State, No. 452, dated December 3, 1903, relative to a contribution from the Ceylon Government in aid of tropical medicine.

Circular Despatch from the Secretary of State, dated May 28, 1903, in regard to a Common Fund proposed to be formed in aid of medical and sanitary training and research in the direction of improving health and sanitation in the tropical Colonies and Protectorates.

Despatch from the Secretary of State, dated December 18, 1903, No. 471, in which he expresses a desire to associate himself with the reference in Sir West Ridgeway's Address to the Legislative Council on the 26th October last, to the loyal and prompt assistance rendered by the Colony to the Empire in connection with the late war in South Africa.

Letter from the General Secretary of the British Association for the Advancement of Science in reply to the invitation sent to them to hold a meeting at an early date in Ceylon, and His Excellency the Governor's reply thereto.

Summary of Report to the Government of Ceylon in the Pearl Oyster Fisheries of the Gulf of Mannar, by Professor W. A. Herdman.

Rules made under the provisions of section 6 of "The Village Communities' Ordinance, 1889," by the several Village Committees in the Province of Uva, and approved by the Governor, with the advice of the Executive Council.

Rules for the Port of Trincomalee framed by the Governor, with the advice of the Executive Council, under the provisions of Ordinance No. 6 of 1865.

Rules framed under the provisions of section 16 of the Village Communities' Ordinance, No. 24 of 1889, for Bentota-Walallawiti korale of the Galle District, of the Southern Province.

Rules made by the Governor, with the advice of the Executive Council, under section 4 of Ordinance No. 2 of 1896.

Rules framed by the Government Agent of the Southern Province for the Game Sanctuary at Yala Walakada in the Hambantota District, under the provisions of section 26 of Ordinance No. 10 of 1885.

Rules framed by the several Village Committees of the Galle, Matara, and Hambantota Districts, under section 16 of the Village Communities' Ordinance, No. 24 of 1889, and approved by the Governor, with the advice of the Executive Council.

Rule made by the Governor, with the advice of the Executive Council, under section 5 of "The Ceylon Railways Ordinance, 1902."

Rules made by the inhabitants of Kadawat korale of Nuwaragam palata, in the North-Central Province, under the provisions of "The Village Communities' Ordinance, 1889," and approved by the Governor, with the advice of the Executive Council.

Amendment of regulation 53 of the Railway Coaching Regulations made under section 5 of Ordinance No. 9 of 1902.

Amendment of regulation 22 of the regulations framed under section 4 of the Quarantine and Prevention of Diseases Ordinance, No. 3 of 1897, dated December 16, 1901.

Amendment of rule 3 of the rules framed under section 50 of "The Village Communities' Ordinance, 1889," dated May 22, 1895.
Amendment of rule 12 of the rules dated January 28, 1900, relating to habitual criminals and convicts licensed to be at large.
Amendment of regulation 25 of the regulations dated December 16, 1901, under Ordinance No. 3 of 1897.
Amended rules and regulations of the Maggona Certified Industrial School and Reformatory.
Additional rule regulating the grant of pensions to officers of the Colombo Municipality.
By-law made by the Local Board of Badulla under section 5 of the Ordinance No. 25 of 1901.
By-laws in force in the Municipality of Colombo on January 1, 1904.
Copy of warrant imposing a charge under Ordinance No. 3 of 1903 on the district of Tittagalla, in the Southern Province, where a punitive police force has been quartered.
Proposed amendment of the rules relating to shipping casualties and the conduct of ships' officers published in the *Government Gazette* of April 20, 1900.
Amended regulations governing the grant of pensions to non-commissioned officers serving under a Colonial Government.
Amended rules governing the transport of arrack by railway made by the Governor, with the advice of the Executive Council, under Ordinance No. 9 of 1902.

Sessional Papers, 1903 :—
No. XLII.—Report of the Central Irrigation Board for 1902.
No. XLIV.—Cacao Commission.

Sessional Papers, 1904 :—
No. I.—Summary of Report to the Government of Ceylon on the Pearl Oyster Fisheries.
No. II.—Government Dairy.
No. III.—Statement and Account of the Widows' and Orphans' Pension Fund for the Year 1903.

QUESTION.

6. The Hon. Mr. W. H. Figg asked—Whether Government claims any right to appropriate, or otherwise dispose of, the balance of about three and a half million rupees now invested with Government, as required by clause 5 of Ordinance No. 1 of 1898, and if so, whether such a claim would not be opposed to the provisions contained in clause 4 of Ordinance No. 1 of 1898, which evidently require that 95 per cent. of the contributions and accretions of interest thereto shall be paid to widows and orphans, and devoted to no other purpose whatsoever.

His Excellency the President ruled that the latter portion of the question was out of order.

The Lieutenant-Governor replied to the first part of the question.

MOTIONS.

7. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That a sum not exceeding Rs. 6,500 be advanced to the Local Board of Ratnapura, for the construction of drains in the town of Ratnapura, to be repaid in ten years, with interest at the rate of four per cent. per annum.

The motion was agreed to.

8. Pursuant to notice, the Lieutenant-Governor, seconded by the Attorney-General, moved—That Kalapugey Dona Simona Jayatilleka of Wadduwa be granted a sum of Rs. 335·91, being the gratuity which was payable to her husband Tepanis Perera, a machinist in the Railway Factory, at the time of his death.

The motion was agreed to.

9. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That a contribution of £100 be made annually by this Colony for a period of five years towards the Common Fund proposed to be formed by the Secretary of State in aid of medical and sanitary training and research, with the object of improving health and sanitation in tropical Colonies and Protectorates.

The motion was agreed to.

10. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That the following sums be charged to the loan of £1,400,000 sterling raised under Ordinance No. 14 of 1900, or to other loans to be raised for the purpose, viz. :—

	Rs.	c.
Half cost of constructing a model of the Colombo Harbour to be exhibited at the St. Louis Exhibition	750	0
Cost of repairing a portion of the northern boundary wall of "Uplands". barbecues	137	73
Cost of 58 Doulton's earthenware squatting plates for the Mutwal and Mahara Prisons	1,052	31
Cost of materials for constructing latrines at Mahara Prison with Doulton's earthenware squatting plates	575	0
Cost of materials for constructing latrines at Mutwal Prison with Doulton's earthenware squatting plates	500	0
Excess of expenditure over estimate in the construction of the Patent Slip...	105,161	44
Amount of expenditure sanctioned for the current year for Harbour improvements	173,560	0
Additional sum required for dredging the Colombo Harbour ...	130,000	0

The motion was agreed to.

His Excellency the President withdrew, and the Hon. the Lieutenant-Governor took the Chair.

11. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That the salary of the Governor of the Colony be increased from Rs. 80,000 to Rs. 96,000 per annum from January 1, 1904, Rs. 18,000 of this sum being regarded as an entertainment allowance to be drawn in full by the Officer Administering the Government in the Governor's absence on full or half pay leave.

The motion was agreed to.

12. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That the salary of the Private Secretary to the Governor of Ceylon be increased from Rs. 3,000 to Rs. 4,500 per annum from January 1, 1904.

The motion was agreed to.

His Excellency the President resumed the Chair.

BILLS.

13. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to further amend 'The Ceylon Railways Ordinance, 1902,'" was read a first time, and the second reading was fixed for the next meeting of Council.

14. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance for the better enforcement of certain conditions in the Sales of Tolls and Arrack Rents" was read a first time, and the second reading was fixed for the next meeting of Council.

15. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to amend the Law relating to the granting of Exclusive Privileges to Inventors" was read a first time, and the second reading was fixed for the next meeting of Council.

16. On the motion of the Attorney-General, seconded by the Lieutenant-Governor, the Bill intituled "An Ordinance to amend the Law relating to the Registration of Trade Marks in Ceylon" was read a first time, and the second reading was fixed for the next meeting of Council.

17. On the motion of the Attorney-General, seconded by the Lieutenant-Governor, the Bill intituled "An Ordinance for the Registration of Designs" was read a first time, and the second reading was fixed for the next meeting of Council.

18. On the motion of the Attorney-General, seconded by the Lieutenant-Governor, the Bill intituled "An Ordinance to regulate the Law relating to Sentences of Flogging" was read a first time, and the second reading was fixed for the next meeting of Council.

19. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to prevent Thefts of Cacao" was read a first time, and the second reading was fixed for the next meeting of Council.

20. On the motion of the Attorney-General, seconded by the Lieutenant-Governor, the Bill intituled "An Ordinance to amend the Widows' and Orphans' Pension Fund Ordinance, 1898," was read a first time, and the second reading was fixed for the next meeting of Council.

21. The Clerk to the Council having read the report of the Law Officers of the Crown, dated 14th December, 1903, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance for making final provision for the Supplementary Contingent Charges for the year 1902" was, on the motion of the Auditor-General, seconded by the Lieutenant-Governor, read a third time and passed.

ADJOURNMENT.

22. On the motion of the Lieutenant-Governor, the Council was on its rising adjourned *sine die*.

WEDNESDAY, JULY 13, 1904.

PRESENT:

His Excellency Sir HENRY A. BLAKE, G.C.M.G., *President*.

The Hon. Mr. E. F. IM THURN, C.B., C.M.G.	The Hon. Mr. W. H. JACKSON.
The Hon. Brigadier-General G. L. C. MONEY, C.B., D.S.O., A.D.C.	The Hon. Mr. S. C. OBEYESEKERE.
The Hon. Mr. A. G. LASCELLES, K.C.	The Hon. Mr. S. N. W. HULUGALLE.
The Hon. Mr. F. R. ELLIS, C.M.G.	The Hon. Mr. W. M. ABDUL RAHIMAN.
The Hon. Mr. H. L. CRAWFORD.	The Hon. Mr. W. H. FIGG.
The Hon. Mr. G. M. FOWLER.	The Hon. Mr. GILES F. WALKER.
The Hon. Mr. H. WACE, C.M.G.	The Hon. Mr. W. D. GIBBON.
The Hon. Mr. F. A. COOPER, C.M.G.	The Hon. Mr. J. VAN LANGENBERG.
	The Hon. Mr. W. N. S. ASERAPPA.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

OATHS.

2. The Hon. Mr. H. L. Crawford, the Hon. Mr. J. van Langenberg, and the Hon. Mr. W. N. S. Aserappa took their oaths on taking their seats as Members of Council.

CLERK SWORN.

3. Mr. A. R. Slater took the oath of allegiance on assuming office as Clerk of the Council.

MINUTES.

4. The Minutes of the last Meeting were read and confirmed.

PETITIONS.

5. The Hon. Mr. S. N. W. Hulugalle presented a petition from two toll renters in the Puttalam District regarding loss alleged to have been sustained owing to the raising of the price of salt transported from Puttalam to Kurunegala.

6. The Hon. Mr. S. C. Obeyesekere presented a petition from the inhabitants of certain villages in the Rayigam korale of the Western Province regarding a Village Committee levy of 50 cents.

7. The Hon. Mr. S. C. Obeyesekere presented a petition protesting against the Bill intituled "An Ordinance to amend 'The Masters Attendant's Ordinance, 1865.'"

PAPERS.

8. The Lieutenant-Governor laid on the table the following papers :—

Accounts of the Provincial Road Committee for 1903.

Despatch from the Secretary of State No. 163 of 6th May, 1904 (increase to Governor's salary).

Papers relating to the harbour tugs "Samson" and "Goliath."

The Ceylon Blue Book for 1903.

Sessional Papers, 1904 :—

No. IV.—Report on the survey of the proposed extension to Pelmadulla of the Ratnapura Railway.

No. VI.—Reports on the extension of the Railway to Ratnapura.

No. VII.—Completion Report of the Kelani Valley Railway.

No. IX.—Review of the Trade in Ceylon for the year 1903.

No. X.—Statement of sums apportioned from the Irrigation Fund to each Province for expenditure in 1904.

No. XI.—Papers relating to Ceylon and the London University.

Administration Reports, 1904 :—

Part I., Revenue : Memorandum on the Customs Revenue Returns for 1904 ; Reports of the Government Agents of the Western, Central, Southern, Eastern, North-Central, Uva, and Sabaragamuwa Provinces.

Part II., Scientific : Reports of the Director of Public Works and the Surveyor-General.

Part III., Judicial : Reports of the Inspector-General of Police and Prisons.

Part IV., Miscellaneous : Reports of the Director of Public Instruction, Director of the Royal Botanic Gardens, Director of the Colombo Museum, Director of the Mineralogical Survey, Resident Engineer of the Colombo Harbour Works, Land Settlement Officer, and Consulting Electrical Engineer.

Regulations relating to the importation of sugar into Ceylon framed under "The Sugar Conventions Ordinance, 1903."

Regulations relating to the issue of certificates proving the origin of sugars exported from Ceylon framed under "The Sugar Conventions Ordinance, 1903."

Port rules for the Port of Colombo.

Rules framed under section 5 of the Ceylon Railways Ordinance, No. 9 of 1902.

Rules framed for the forest at Wilpattu in the North-Central Province.

Rules framed under section 16 of "The Village Communities' Ordinance, 1889," for the island of Delft.

Rules framed under section 6 of "The Village Communities' Ordinance, 1889, (1) for Mannar East division of the Mannar District and (2) for the North-Central Province.

Amended rules framed under section 4 of "The Mines and Machinery Ordinance, 1896."

Additional and amended rules framed under section 26 of "The Irrigation and Paddy Cultivation Ordinance, 1889," for East Giruwa pattu of the District of Hambantota.

Additional rules framed under section 26 of "The Irrigation and Paddy Cultivation Ordinance, 1889," for the district of Hiriyala hatpattu of Seven Korales in the North-Western Province.

Additional rules relating to the grant of pensions and gratuities to Road Committee Officers.

By-laws under section 38 of "The Cemeteries and Burials Ordinance, 1899," for Nawalapitiya, Hatton-Dikoya, and Gampola.

By-laws under section 5 of "The Dog Registration Ordinance, 1901," for the towns of Jaffna, Mannar, Mullaittivu, Vavuniya, Point Pedro, and Negombo.

Papers relating to the damage caused by the floods in the Batticaloa District.

Papers relating to the railway accident near Bandarawela.

NOTICE OF MOTION.

9. The Lieutenant-Governor gave notice that he would at a sitting of Council not less than one month from date of notice move—

(1) That a toll be established at the ferry over the Panadure river at Panadure, in the District of Kalutara, Western Province, between the end of the old road on the west bank and the old landing-place on the east bank near the resthouse.

(2) That from and after the First day of January, 1905, a toll be established at the ferry over the river Gin-ganga at Dodangoda, in the District of Galle, Southern Province, at the spot where the minor road from Ratgama meets the said river.

(3) That from and after the First day of January, 1905, a toll be established at Hakmana on the minor road from Hakmana to Walasmulla in the Southern Province.

QUESTIONS.

10. Pursuant to notice, the Hon. Mr. W. D. Gibbon asked—If any decision has been arrived at by Government in regard to the erection of a new bridge at Peradeniya, and perfecting arrangements for horse, carriage, and passenger traffic across the river during the stoppage of traffic across the old satinwood bridge.

The Lieutenant-Governor replied.

11. Pursuant to notice, the Hon. Mr. W. D. Gibbon asked—If the Rugam tank is now considered safe from accidents by excessive rainfall.

The Lieutenant-Governor replied.

MOTIONS.

12. Pursuant to notice, the Hon. Mr. W. D. Gibbon, seconded by the Hon. Mr. Giles F. Walker, moved—For papers received by Government on the destruction of property caused by the injury to embankment at Unnichchai tank in Batticaloa in January last.

The motion was agreed to.

13. Pursuant to notice, the Hon. Mr. W. D. Gibbon, seconded by the Hon. Mr. W. H. Figg, moved—That the Legislative Council be furnished with reports of Ceylon Government Railway Engineers on the recent railway accident at Bandarawela.

The motion was agreed to.

14. Pursuant to notice, the Hon. Mr. W. D. Gibbon, seconded by the Hon. Mr. Giles F. Walker, moved—That in the opinion of the Council the maintenance of a sufficient labour force is of vital importance to the industries of this Colony; that this end may be furthered by the appointment by the Planters' Association of Ceylon of a Labour Commissioner to reside in South India, and that towards this enterprise the Government of Ceylon should afford such assistance as may seem fit to His Excellency the Governor.

The Council divided as follows:—

Ayes.	*Noes.*
The Hon. Mr. W. D. Gibbon.	The Hon. Mr. W. N. S. Aserappa.
The Hon. Mr. Giles F. Walker.	The Hon. Mr. J. van Langenberg.
The Hon. Mr. W. H. Figg.	The Hon. Mr. W. M. Abdul Rahiman.
The Hon. Mr. W. H. Jackson.	The Hon. Mr. S. N. W. Hulugalle.
The Hon. Mr. F. A. Cooper.	The Hon. Mr. S. C. Obeyesekere.
The Government Agent, Central Province.	
The Government Agent, Western Province.	
The Treasurer.	
The Auditor-General.	
The Attorney-General.	
The Officer Commanding the Troops.	
The Lieutenant-Governor.	

Ayes, 12; Noes, 5; Majority 7. The motion was therefore carried.

15. The motion standing in the name of the Hon. Mr. S. C. Obeyesekere regarding the prevention of floods within a radius of 50 miles from Colombo was, with the permission of the Council, withdrawn.

16. Pursuant to notice, the Hon. Mr. S. C. Obeyesekere, seconded by the Hon. the Lieutenant-Governor, moved—For a return showing the number of people within a radius of one mile from Elie House, Mutwal, Colombo, who (*a*) suffered from, (*b*) recovered from, and (*c*) died of fever within the last twelve months and in each of the four years preceding that period.

The motion was agreed to.

17. Pursuant to notice, the Lieutenant-Governor, seconded by the Attorney-General, moved—That the following rule be substituted for Rule No. 51 of the Rules and Orders of the Council, namely:—

Every bill proposed for first reading shall be accompanied by a printed statement signed by the Attorney-General stating the object of, and reasons for, the bill. No discussion shall be permitted upon a motion for the first reading of a bill.

The motion was agreed to.

18. Pursuant to notice, the Lieutenant-Governor, seconded by the Attorney-General, moved—That this Council approves the principle of certain expenditure on the Ceylon Volunteer Force beyond that now voted in the annual Supply Bill, to wit:—

(*a*) A sum of Rs. 25,000 to be voted annually to cover the cost of the additional staff advised as necessary to bring the force up to a proper state of efficiency.

(*b*) A sum of Rs. 4,310 to be provided in 1905 to cover the cost of the formation of a detachment of the Ceylon Light Infantry at Chilaw.

(*c*) A sum of Rs. 16,310 to be provided in 1905 to cover the cost of the formation of a company of the Ceylon Light Infantry at Moratuwa.

The motion was agreed to.

19. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That the following sums be charged to the loan of £1,400,000 sterling raised under Ordinance No. 14 of 1900, or to other loans to be raised for the purpose, viz.:—

	Rs.	c.
Cost of lifting and thoroughly repairing the lightship placed to protect vessels from the rubble mound of the Breakwater, which foundered during a heavy storm on the night of the 1st September, 1903 ...	12,000	0
Cost of repairing the Mahara Jail	2,000	0
Excess cost of the tugs "Samson" and "Goliath" imported for use in the Colombo Harbour; cost of alterations to the tugs made locally; and cost of upkeep up to 31st December, 1903 ...	208,906	76
Cost of improvements to the cemented platforms at the Mahara Jail...	45	0
Cost of transferring the crane from the barge of the dredger now working in the Colombo Harbour, which is in a dangerous condition, to another suitable barge	7,500	0
Cost of extending the plumbago and oil jetty in the Customs premises	32,323	0

The motion was agreed to.

BILLS.

20. On the motion of the Attorney-General, seconded by the Lieutenant-Governor, the Bill intituled "An Ordinance to further amend the Law relating to the General Regulation of Customs" was read a first time, and the second reading was fixed for the next meeting of Council.

21. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to amend 'The Masters Attendant's Ordinance, 1865,'" was read a first time, and the second reading was fixed for the next meeting of Council.

22. On the motion of the Attorney-General, seconded by the Lieutenant-Governor, the Bill intituled "An Ordinance for securing the Public against danger arising from the use of Rifle and Artillery Ranges" was read a first time, and the second reading was fixed for the next meeting of Council.

23. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to amend in certain particulars the Law relating to the Administration of the Estates of Persons dying Intestate and to the Powers of District Courts to take charge of the Property of Minors and Wards" was read a first time, and the second reading was fixed for the next meeting of Council.

24. On the motion of the Attorney-General, seconded by the Lieutenant-Governor, the Bill intituled "An Ordinance to further amend 'The Ceylon Railways Ordinance, 1902,'" was read a second time, and the Council went into Committee thereon. The Bill having been reported as passed in Committee was referred to the Law Officers of the Crown for report.

25. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance for the better enforcement of certain conditions in the Sales of Tolls and Arrack Rents" was read a second time, and the Council went into Committee thereon. In Committee the Bill was referred to a Sub-Committee consisting of the Attorney-General, the Auditor-General, the Hon. Mr. S. C. Obeyesekere, and the Hon. Mr. J. van Langenberg.

26. On the motion of the Attorney-General, seconded by the Lieutenant-Governor, the Bill intituled "An Ordinance to amend the Law relating to the granting of Exclusive Privileges to Inventors" was read a second time, and the Council went into Committee thereon. In Committee the Bill was referred to a Sub-Committee consisting of the Attorney-General, the Hon. Mr. F. A. Cooper, the Hon. Mr. W. H. Jackson, the Hon. Mr. W. H. Figg, and the Hon. Mr. J. van Langenberg.

27. On the motion of the Attorney-General, seconded by the Lieutenant-Governor, the Bill intituled "An Ordinance to amend the Law relating to the Registration of Trade Marks in Ceylon" was read a second time, and the Council went into Committee thereon. In Committee the Bill was referred to a Sub-Committee consisting of the Attorney-General, the Hon. Mr. F. A. Cooper, the Hon. Mr. W. H. Jackson, the Hon. Mr. W. H. Figg, and the Hon. Mr. J. van Langenberg.

28. On the motion of the Attorney-General, seconded by the Lieutenant-Governor, the Bill intituled "An Ordinance for the Registration of Designs" was read a second time, and the Council went into Committee thereon. In Committee the Bill was referred to a Sub-Committee consisting of the Attorney-General, the Hon. Mr. F. A. Cooper, the Hon. Mr. W. H. Jackson, the Hon. Mr. W. H. Figg, and the Hon. Mr. J. van Langenberg.

29. On the motion of the Attorney-General, seconded by the Lieutenant-Governor, the Bill intituled "An Ordinance to regulate the Law relating to Sentences of Flogging" was read a second time, and the Council went into Committee thereon. The Bill having been reported as passed in Committee was referred to the Law Officers of the Crown for report.

30. On the motion of the Attorney-General, seconded by the Lieutenant-Governor, the Bill intituled "An Ordinance to prevent Thefts of Cacao" was read a second time, and the Council went into Committee thereon. In Committee the Bill was referred to a Sub-Committee consisting of the Attorney-General, the Treasurer, the Government Agent, Central Province, the Hon. Mr. S. C. Obeyesekere, the Hon. Mr. S. N. W. Hulugalle, the Hon. Mr. Giles F. Walker, the Hon. Mr. W. D. Gibbon, and the Hon. Mr. J. van Langenberg.

ADJOURNMENT.

31. On the motion of the Lieutenant-Governor, the Council was on its rising adjourned till Wednesday, July 27, 1904, at 2.30 P.M.

WEDNESDAY, JULY 27, 1904.

PRESENT:

The Hon. Mr. E. F. IM THURN, C.B., C.M.G.
The Hon. Mr. A. G. LASCELLES, K.C.
The Hon. Mr. F. R. ELLIS, C.M.G.
The Hon. Mr. H. L. CRAWFORD.
The Hon. Mr. G. M. FOWLER.
The Hon. Mr. H. WACE, C.M.G.
The Hon. Mr. F. A. COOPER, C.M.G.
The Hon. Mr. W. H. JACKSON.
The Hon. Mr. S. C. OBEYESEKERE.
The Hon. Mr. S. N. W. HULUGALLE.
The Hon. Mr. W. M. ABDUL RAHIMAN.
The Hon. Mr. W. H. FIGG.
The Hon. Mr. GILES F. WALKER.
The Hon. Mr. W. D. GIBBON.
The Hon. Mr. J. VAN LANGENBERG.
The Hon. Mr. W. N. S. ASERAPPA.

1. The Council met pursuant to adjournment. In the absence of His Excellency the President, the Hon. the Lieutenant-Governor took the Chair.

MINUTES.

2. The Minutes of the last Meeting were read and confirmed.

PAPERS.

3. The Auditor-General laid on the table the following papers :—

Administration Reports, 1904 :—

Part I., Revenue: Report of the Government Agent of the North-Western Province.

Part IV., Miscellaneous: Report of the Registrar-General on Lands.

Numerical Abstract showing the number of persons in the several Provinces of the Island liable to perform labour during 1904.

Regulations under the Ceylon Railways Ordinance.

NOTICE OF MOTION.

4. The Auditor-General gave notice that at the next meeting of Council the Lieutenant-Governor would move—That a Sub-Committee be appointed to consider Statement No. 1 of items of expenditure, for which supplementary provision is required.

QUESTION.

5. Pursuant to notice, the Hon. Mr. Giles F. Walker asked—

With reference to a Proclamation recently issued referring to Crown claims upon lands in the North-Western Province which are under cultivation—

(1) Whether this Proclamation was issued by the Government Agent, North-Western Province, and why it was not signed by him or by the authority issuing it.
(2) If it is a fact that surveyors have been put on to survey any such lands without previous notice to their holders or their resident managers, and without calling upon them to prove their title or show cause why the lands in their occupation should not be entered upon.
(3) Whether, if this is the case, it is the intention of Government to continue this procedure, or to employ other methods in the future.

The Auditor-General replied.

MOTIONS.

6. Pursuant to notice, the Hon. Mr. Giles F. Walker, seconded by the Hon. Mr. W. D. Gibbon, moved—For papers in connection with a survey now being carried out on Delwita estate in the planting district of Kurunegala.

With the permission of the Council the motion was withdrawn.

7. Pursuant to notice, the Auditor-General, seconded by the Government Agent, Western Province, moved—That the following sum be charged to the loan of £1,400,000 sterling raised under Ordinance No. 14 of 1900, or to other loans to be raised for the purpose, viz. :—

		Rs.
Cost of re-erecting the store shed at Mahara Jail	...	900

The motion was agreed to.

BILLS.

8. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to provide for the further appropriation of certain Unclaimed Balances from the Loan Board" was read a first time, and the second reading was fixed for the next meeting of Council.

9. The Clerk to the Council having read the report of the Law Officers of the Crown, dated 20th July, 1904, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance to further amend 'The Ceylon Railways Ordinance, 1902,'" was, on the motion of the Attorney-General, seconded by the Treasurer, read a third time and passed.

10. The Clerk to the Council having read the report of the Law Officers of the Crown, dated 20th July, 1904, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance to regulate the Law relating to Sentences of Flogging" was, on the motion of the Attorney-General, seconded by the Treasurer, read a third time and passed.

11. On the motion of the Attorney-General, seconded by the Treasurer, the Council went into Committee on the Bill intituled "An Ordinance for the better enforcement of certain conditions in the Sales of Tolls and Arrack Rents," and the Attorney-General brought up the report of the Sub-Committee, which, with the permission of the Council, was taken as read. The Bill having been reported as amended in Committee was referred to the Law Officers of the Crown for report.

12. On the motion of the Attorney-General, seconded by the Treasurer, the Council went into Committee on the Bill intituled "An Ordinance to amend the Law relating to the granting of Exclusive Privileges to Inventors," and the Attorney-General brought up the report of the Sub-Committee, which, with the permission of the Council, was taken as read. The Bill having been reported as amended in Committee was referred to the Law Officers of the Crown for report.

13. On the motion of the Attorney-General, seconded by the Treasurer, the Council went into Committee on the Bill intituled "An Ordinance to amend the Law relating to the Registration of Trade Marks in Ceylon," and the Attorney-General brought up the report of the Sub-Committee, which, with the permission of the Council, was taken as read. The Bill having been reported as amended in Committee was referred to the Law Officers of the Crown for report.

14. On the motion of the Attorney-General, seconded by the Treasurer, the Council went into Committee on the Bill intituled "An Ordinance for the Registration of Designs," and the Attorney-General brought up the report of the Sub-Committee, which, with the permission of the Council, was taken as read. The Bill having been reported as amended in Committee was referred to the Law Officers of the Crown for report.

15. On the motion of the Attorney-General, seconded by the Treasurer, the Council went into Committee on the Bill intituled "An Ordinance to prevent Thefts of Cacao," and the Attorney-General brought up the report of the Sub-Committee, which, with the permission of the Council, was taken as read. The Bill having been reported as amended in Committee was referred to the Law Officers of the Crown for report.

16. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to further amend the Law relating to the General Regulation of Customs" was read a second time, and the Council went into Committee thereon. The Bill having been reported as passed in Committee was referred to the Law Officers of the Crown for report.

17. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to amend 'The Masters Attendant's Ordinance, 1865,'" was read a second time, and the Council went into Committee thereon. The Bill having been reported as passed in Committee was referred to the Law Officers of the Crown for report.

18. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance for securing the Public against danger arising from the use of Rifle and Artillery Ranges" was read a second time, and the Council went into Committee thereon. The Bill having been reported as passed in Committee was referred to the Law Officers of the Crown for report.

19. On the motion of the Attorney-General, seconded by the Treasurer, the Bill intituled "An Ordinance to amend in certain particulars the Law relating to the Administration of Estates of Persons dying Intestate and to the Powers of District Courts to take charge of the Property of Minors and Wards" was read a second time, and the Council went into Committee thereon. In Committee the Bill was referred to a Sub-Committee consisting of the Attorney-General, the Treasurer, the Hon. Mr. S. C. Obeyesekere, and the Hon. Mr. J. van Langenberg.

ADJOURNMENT.

20. On the motion of the Lieutenant-Governor, the Council was on its rising adjourned *sine die*.

WEDNESDAY, AUGUST 17, 1904.

PRESENT:

His Excellency Sir HENRY A. BLAKE, G.C.M.G., *President*.

The Hon. Mr. E. F. IM THURN, C.B., C.M.G.
The Hon. Brigadier-General G. L. C. MONEY, C.B., D.S.O., A.D.C.
The Hon. Mr. J. H. TEMPLER.
The Hon. Mr. F. R. ELLIS, C.M.G.
The Hon. Mr. H. L. CRAWFORD.
The Hon. Mr. G. M. FOWLER.
The Hon. Mr. H. WACE, C.M.G.
The Hon. Mr. F. A. COOPER, C.M.G.
The Hon. Mr. W. H. JACKSON.
The Hon. Mr. W. G. ROCKWOOD, M.D.
The Hon. Mr. S. C. OBEYESEKERE.
The Hon. Mr. W. M. ABDUL RAHIMAN.
The Hon. Mr. W. H. FIGG.
The Hon. Mr. W. D. GIBBON.
The Hon. Mr. J. VAN LANGENBERG.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

OATH.

2. The Hon. Mr. J. H. Templer took his oath on taking his seat as Member of Council.

MINUTES.

3. The Minutes of the last Meeting were read and confirmed.

ORDINANCES ASSENTED TO.

4. The Lieutenant-Governor announced that His Excellency the Governor had given his assent to the following Ordinances:—

Ordinance No. 2 of 1904, intituled "An Ordinance to further amend 'The Ceylon Railways Ordinance, 1902.'"

Ordinance No. 3 of 1904, intituled "An Ordinance to regulate the Law relating to Sentences of Flogging."

PAPERS.

5. The Lieutenant-Governor laid on the table the following papers:—

Administration Reports, 1904:—

Part II., Scientific: Report of the Director of Irrigation.

Part IV., Miscellaneous: Reports of the Postmaster-General and Director of Telegraphs, and the Government Veterinary Surgeon.

Sessional Papers, 1904:—

No. XIII.—Reports on the Pearl Fishery of 1904.

Addition to regulation 30 of the regulations dated February 22, 1899, framed under "The Colombo Waterworks Ordinance, 1886."

QUESTION.

6. Pursuant to notice, the Hon. Mr. W. D. Gibbon asked—

What progress is being made by Government in preparing for further Railway Extension to Ratnapura and from Bandarawela to Badulla and Passara.

The Lieutenant-Governor replied.

MOTIONS.

7. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That from and after the First day of January, 1905, a toll be established at the ferry over the river Gin-ganga at Dodangoda, in the District of Galle, Southern Province, at the spot where the minor road from Ratgama meets the said river.

The motion was agreed to.

8. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That from and after the First day of January, 1905, a toll be established at Hakmana on the minor road from Hakmana to Walasmulla in the Southern Province.

The motion was agreed to.

9. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That a toll be established at the ferry over the Panadure river at Panadure, in the District of Kalutara, Western Province, between the end of the old road on the west bank and the old landing-place on the east bank near the resthouse.

The motion was agreed to.

10. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That the following sums be charged to the loan of £1,400,000 sterling raised under Ordinance No. 14 of 1900, or to other loans to be raised for the purpose, viz.:—

Cost of an additional dredger and barge for the Colombo Harbour	£3,950
Cost of repairs to latrines at the Mahara quarry ...	Rs. 300

The motion was agreed to.

11. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That Carrupie, the widow of the Ways and Works cooly Saibu, who was killed while in the discharge of his duty on the 4th February last, be awarded a pension of Rs. 100 per annum under clause 32 of the Pension Minute.

The motion was agreed to.

BILLS.

12. The Attorney-General having brought up the report of the Law Officers of the Crown, dated 2nd August, 1904, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance for the better enforcement of certain conditions in the Sales of Tolls, Arrack Rents, and Opium Licenses" was, on the motion of the Attorney-General, seconded by the Treasurer, read a third time and passed.

13. The Attorney-General having brought up the report of the Law Officers of the Crown, dated 2nd August, 1904, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance to amend the Law relating to the granting of Exclusive Privileges to Inventors" was, on the motion of the Attorney-General, seconded by the Lieutenant-Governor, read a third time and passed.

14. The Attorney-General having brought up the report of the Law Officers of the Crown, dated 2nd August, 1904, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance to amend the Law relating to the Registration of Trade Marks in Ceylon" was, on the motion of the Attorney-General, seconded by the Lieutenant-Governor, read a third time and passed.

15. The Attorney-General having brought up the report of the Law Officers of the Crown, dated 2nd August, 1904, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance for the Registration of Designs" was, on the motion of the Attorney-General, seconded by the Lieutenant-Governor, read a third time and passed.

16. The Attorney-General having brought up the report of the Law Officers of the Crown, dated 2nd August, 1904, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance to prevent Thefts of Cacao" was, on the motion of the Attorney-General, seconded by the Lieutenant-Governor, read a third time and passed.

17. The Attorney-General having brought up the report of the Law Officers of the Crown, dated 2nd August, 1904, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance to further amend the Law relating to the General Regulation of Customs" was, on the motion of the Attorney-General, seconded by the Lieutenant-Governor, read a third time and passed.

18. The Attorney-General having brought up the report of the Law Officers of the Crown, dated 2nd August, 1904, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance to amend 'The Masters Attendant's Ordinance, 1865,'" was, on the motion of the Attorney-General, seconded by the Lieutenant-Governor, read a third time and passed.

19. The Attorney-General having brought up the report of the Law Officers of the Crown, dated 2nd August, 1904, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft, the Bill intituled "An Ordinance for securing the Public against danger arising from the use of Rifle and Artillery Ranges" was, on the motion of the Attorney-General, seconded by the Lieutenant-Governor, read a third time and passed.

20. On the motion of the Attorney-General, seconded by the Lieutenant-Governor, the Council went into Committee on the Bill intituled "An Ordinance to amend in certain particulars the Law relating to the Administration of the Estates of Persons dying Intestate and to the Powers of District Courts to take charge of the Property of Minors and Wards," and the Attorney-General brought up the report of the Sub-Committee, which, with the permission of the Council, was taken as read. The Bill having been reported as amended in Committee, the Attorney-General brought up the report of the Law Officers of the Crown, dated 13th August, 1904, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft. The Standing Orders having been suspended with the consent of the Council, the Bill was, on the motion of the Attorney-General, seconded by the Lieutenant-Governor, read a third time and passed.

21. On the motion of the Attorney-General, seconded by the Lieutenant-Governor, the Bill intituled "An Ordinance to provide for the further appropriation of certain Unclaimed Balances from the Loan Board" was read a second time, and the Council went into Committee thereon. The Bill having been reported as passed in Committee, the Attorney-General brought up the report of the Law Officers of the Crown, dated 9th August, 1904, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law framed in terms of the draft. The Standing Orders having been suspended with the consent of the Council, the Bill was, on the motion of the Attorney-General, seconded by the Lieutenant-Governor, read a third time and passed.

ADJOURNMENT.

22. On the motion of the Lieutenant-Governor, the Council was on its rising adjourned *sine die*.

TUESDAY, NOVEMBER 15, 1904.

PRESENT:

His Excellency Sir HENRY A. BLAKE, G.C.M.G., *President.*

The Hon. Mr. A. M. ASHMORE, C.M.G.
The Hon. Brigadier-General G. L. C. MONEY, C.B., D.S.O., A.D.C.
The Hon. Mr. J. H. TEMPLER.
The Hon. Mr. F. R. ELLIS, C.M.G.
The Hon. Mr. H. C. NICOLLE.
The Hon. Mr. G. M. FOWLER.
The Hon. Mr. F. A. COOPER, C.M.G.
The Hon. Mr. W. H. JACKSON.
The Hon. Mr. W. G. ROCKWOOD, M.D.
The Hon. Mr. S. C. OBEYESEKERE.
The Hon. Mr. S. N. W. HULUGALLE.
The Hon. Mr. F. C. LOOS.
The Hon. Mr. W. H. FIGG.
The Hon. Mr. E. ROSLING.
The Hon. Mr. JOHN FERGUSON, C.M.G.

1. The Council met pursuant to adjournment. His Excellency the Governor took the Chair.

OATHS.

2. The Hon. Mr. A. M. Ashmore and the Hon. Mr. H. C. Nicolle took their oaths on taking their seats as Members of Council.

MINUTES.

3. The Minutes of the last Meeting were read and confirmed.

ORDINANCES ASSENTED TO.

4. The Lieutenant-Governor announced that His Excellency the Governor had assented to the following Ordinances :—

Ordinance No. 4 of 1904, intituled "An Ordinance for the better enforcement of certain conditions in the Sales of Tolls, Arrack Rents, and Opium Licenses."

Ordinance No. 5 of 1904, intituled "An Ordinance to amend the Law relating to the granting of Exclusive Privileges to Inventors."

Ordinance No. 6 of 1904, intituled "An Ordinance to amend the Law relating to the Registration of Trade Marks in Ceylon."

Ordinance No. 7 of 1904, intituled "An Ordinance for the Registration of Designs."

Ordinance No. 8 of 1904, intituled "An Ordinance to prevent Thefts of Cacao."

Ordinance No. 9 of 1904, intituled "An Ordinance to further amend the Law relating to the General Regulation of Customs."

Ordinance No. 10 of 1904, intituled "An Ordinance to amend 'The Masters Attendant's Ordinance, 1865.'"

Ordinance No. 11 of 1904, intituled "An Ordinance for securing the Public against danger arising from the use of Rifle and Artillery Ranges."

Ordinance No. 12 of 1904, intituled "An Ordinance to amend in certain particulars the Law relating to the Administration of the Estates of Persons dying Intestate and to the Powers of District Courts to take charge of the Property of Minors and Wards."

Ordinance No. 13 of 1904, intituled "An Ordinance to provide for the further appropriation of certain Unclaimed Balances from the Loan Board."

PAPERS.

5. The Lieutenant-Governor laid on the table the following papers :—

Ceylon Administration Reports, 1903.

Sessional Papers, 1904 :—

No. XXI.—Returns under the Waste Lands Ordinances.

No. XXII.—Return of Lands resumed by Government under Ordinance No. 4 of 1887 during 1903.

No. XXIII.—Report on the Biological Results of the Pearl Fishery of 1904.

No. XXIV.—Administration Report of the Municipal Council of Galle for 1903.

By-laws framed under "The Vehicles Ordinance, 1901," for the towns of Ratnapura, Badulla, Kurunegala, Trincomalee, Kegalla, Galle, Matale, Kalutara, Chilaw, Matara, Puttalam, and Minuwangoda; for the Districts of Kegalla, Ratnapura, Trincomalee, Batticaloa, Puttalam, Chilaw, and Kalutara; and for the Province of Uva.

By-laws framed under "The Dog Registration Ordinance, 1901," for the towns of Dehiowita and Yatiyantota.

Rules framed under "The Ceylon Railways Ordinance, 1902."

Rules framed under "The Irrigation and Paddy Cultivation Ordinance, 1889," for the irrigation district of Ratnapura.

Rules framed under "The Village Communities' Ordinance, 1889," (1) for the North-Central Province and (2) for Dikwella in the Southern Province.

By-laws framed under "The Local Boards' Ordinance, 1898," for the town of Kurunegala

Rules framed under "The Ceylon Postal and Telegraph Ordinance, 1892."

PETITION.

6. The Hon. Mr. S. N. W. Hulugalle presented a petition from the residents of certain villages, which were brought within the limits of the Municipality of Kandy in 1902, praying that those villages may be excluded from the limits.

MOTIONS.

7. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That this Council approves the grant to the Ceylon Volunteer Rifle Association of a sum of Rupees Five hundred annually for the purpose of promoting and encouraging rifle shooting throughout the Volunteer Force in this Colony.

The motion was agreed to.

8. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That from and after the First January, 1905, the import duty on malt be the same as that on barley imported for brewing purposes, viz., 33 cents per cwt.

The motion was agreed to.

9. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That a sum not exceeding Rs. 4,000 be advanced to the Local Board of Batticaloa to cover the cost of two boats required for the Kalladi ferry ; the amount advanced, together with interest at the rate of four per cent. per annum, to be repaid by transfer to Government of the total proceeds of the toll each year, provided that not less than one-tenth of the amount advanced is repaid within any one year.

The motion was agreed to.

10. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That in addition to the advance of Rs. 36,000 approved by resolution of this Council on the 31st October, 1903, a further sum of Rs. 4,000 be advanced to the Board of Improvement of Nuwara Eliya, to complete the Town Hall and Assembly Rooms for that town, to be repaid by a sinking fund of one per cent. per annum, with interest at four per cent. per annum.

The motion was agreed to.

11. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That the following sum be charged to the loan of £1,400,000 sterling raised under Ordinance No. 14 of 1900, or to other loans to be raised for works in connection with Colombo Harbour Extension, &c.:—

	Rs. c.
Excess of expenditure incurred in shifting the moorings in the Colombo Harbour ...	568 76

The motion was agreed to.

12. Pursuant to notice, the Lieutenant-Governor, seconded by the Treasurer, moved—That Ersani and Martha Maria Perera, widows of the late Police Constables Nos. 787 Abdul and 307 Charles Perera, who were shot in Kandy by A. M. Robertson on the 29th August last while in the execution of their duty, be awarded pensions of Rs. 100 each per annum, and that the following gratuities be awarded to their children, viz.:—

	Rs.
To the five children of Police Constable Abdul ...	325
To the child of Police Constable Charles Perera ...	110

The motion was agreed to.

CLOSING OF THE SESSION.

13. His Excellency the Governor declared the Session of Council closed.

XXIII.—1903.

PAPERS

RELATING TO

THE QUESTION OF OVERTIME PAID TO CUSTOMS OFFICERS.

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 20 cents.

1903.

CUSTOMS OVERTIME CHARGES.

No. 1.

The SECRETARY, Chamber of Commerce, to the Hon. the COLONIAL SECRETARY.

Colombo, November 20, 1901.

SIR,—I HAVE the honour to inform you that I am desired by the Committee of this Chamber to address you with regard to the "Return showing the Amount received by the Customs Department in respect of Overtime Charges during the years 1899-1900, together with the appropriation thereof," which was furnished by Government in accordance with the recent request of the Mercantile Member of Council.

2. I am to state that, in the opinion of this Chamber, the charge at present made to steamers of Rs. 6 per hour is excessive, and should be considerably reduced. This opinion is based upon the fact that, as is made apparent by the return :—

(*a*) More is realized by Government than is necessary, even on the present scale of expenditure, and there should be no such heavy balance for transfer to the credit of the General Revenue, as has recently been the case.

(*b*) The various items, such as the cost of a steam launch, &c., have been, in their opinion, improperly debited to Overtime Account.

(*c*) The amounts paid to Customs officers engaged are out of all proportion to the fixed salaries paid, and should be largely reduced.

3. The Chamber feel that the slightest consideration of the return above referred to is sufficient to confirm their views, and they would consequently suggest the propriety of immediate reform upon the following lines :—

(*a*) That fees should only be charged for the time the steamer agents apply to work ; that is, supposing an application is made to work a steamer as from 1 A.M., the time of her expected arrival, no charge should be made for officers alleged to have been awaiting her arrival from the time the Customs closed on the previous afternoon.

(*b*) That such Customs officers as are actually required to be in attendance during the carrying on of the overtime work should be paid a *fair* remuneration for "overtime" whilst so engaged, and that payments on the present heavy scale should be suspended *forthwith*, pending the adoption of a revised scale.

4. In view of the recommendation made by the Wharf Commission as far back as 1897, my Committee desire me to express the hope that this matter will receive the earliest possible attention of Government, in order that relief may be afforded from the exceedingly heavy fees which have been levied upon the Colombo shipping during the past few years, without, as it would seem, sufficient justification.

I have, &c.,

FRED. W. WALDOCK,
Secretary.

No. 2.

The Hon. the COLONIAL SECRETARY to the SECRETARY, Chamber of Commerce.

Colonial Secretary's Office,
Colombo, January 11, 1902.

SIR,—REFERRING to your letter of 30th December, inviting attention to your letter of 20th November last, relative to the charges now recovered as overtime fees by the Customs Department, I am directed to inform you that the question is under consideration.

I am, &c.,

A. G. CLAYTON,
for Colonial Secretary.

No. 3.

The Hon. the COLONIAL SECRETARY to the Hon. Mr. F. R. ELLIS, C.M.G.; the Hon. Mr. W. H. JACKSON ; and A. S. PAGDEN, Esq.

Colonial Secretary's Office,
Colombo, March 18, 1902.

GENTLEMEN,—I AM directed to inform you that His Excellency the Governor desires you to be so good as to meet the Hon. Mr. W. H. Figg and Messrs. Stanley Bois and W. Shakspeare in order to discuss with them the present system of overtime working at the Customs with a view to its amendment, and thus to effect a settlement of the question.

2. It is the wish of His Excellency that the first meeting should be held at noon on Friday next, the 21st instant, in the Council Chamber.

I am, &c.,

A. G. CLAYTON,
for Colonial Secretary.

No. 4.

The Hon. the COLONIAL SECRETARY to the Hon. Mr. W. H. FIGG; STANLEY BOIS, Esq.; and W. SHAKSPEARE, Esq.

Colonial Secretary's Office,
Colombo, March 18, 1902.

GENTLEMEN,—WITH reference to the question of the present system of overtime working at the Customs, I am directed to inform you that His Excellency the Governor will be glad if you will be so good as to meet the Hon. Messrs. F. R. Ellis and W. H. Jackson and Mr. A. S. Pagden in order to discuss the question and to effect a settlement.

2. It is the wish of His Excellency that the first meeting should be held at noon on Friday next, the 21st instant, at the Council Chamber.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 5.

TELEGRAM from HIS EXCELLENCY THE GOVERNOR to the Hon. the COLONIAL SECRETARY.

I THINK that before Mixed Overtime Committee meets, Official Members should consider whether increase of staff is necessary, or whether, as work is not increasing, existing staff will not suffice. If so, reduction of fees will enable reduction of overtime charges to be made.

No. 6.

The Hon. the COLONIAL SECRETARY to the Hon. Mr. F. R. ELLIS, C.M.G.; the Hon. Mr. W. H. JACKSON; and A. S. PAGDEN, Esq.

Colonial Secretary's Office,
Colombo, March 19, 1902.

GENTLEMEN,—WITH reference to my letter of the 18th instant, appointing you a Committee to discuss the present system of overtime working at the Customs with the Hon. Mr. W. H. Figg and Messrs. Stanley Bois and W. Shakspeare, I am directed to forward for your information a copy of a telegram on the subject received from the Governor, and to request you to be good enough to comply with His Excellency's wishes.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 7.

The Hon. Mr. F. R. ELLIS, C.M.G., the Hon. Mr. W. H. JACKSON, and A. S. PAGDEN, Esq., to the Hon. the COLONIAL SECRETARY.

Colombo, March 22, 1902.

SIR,—REFERRING to your letter with reference to overtime, we have the honour to forward herewith the report of the Committee.

It would at present be impossible to say what sum would be available for an increase in the officers, and we advise that this question be considered when the new system has been at work for three months. Some estimate can then be framed of the financial results on the Overtime Fund.

F. R. ELLIS.
W. H. JACKSON.
A. S. PAGDEN.

Enclosure in No. 7.

REPORT of the Committee on the Question of Overtime Charges.

Colombo, March 21, 1902.

Present: All members of the Committee except Mr. Figg.

The question of overtime is discussed.

Mr. Figg now arrives.

After some further discussion, the following resolution is unanimously agreed to :—

We approve of the following arrangement. Steamer companies to be allowed the option of paying Rs. 6 per hour for the working of any number of ships belonging to one company, or of paying Rs. 4 an hour; this to be paid for each ship that works. This will cause a reduction in the total amount paid on account of overtime, and should be accompanied by a proportionate reduction (estimated at 33 per cent.) in the overtime allowance paid to officers. The agents of ships to give one month's notice if they wish to change their system of working from the six-rupee to the four-rupee scale, or *vice versâ*.

This system to continue in force for a year; at the end of that time the question to be reconsidered in the light of the figures which will then be available.

F. R. ELLIS.
W. H. JACKSON.
W. HENRY FIGG.
W. SHAKSPEARE.
STANLEY BOIS.
A. S. PAGDEN.

No. 8.

The Hon. the COLONIAL SECRETARY to the PRINCIPAL COLLECTOR OF CUSTOMS.

No. 65 / 06700

Colonial Secretary's Office,
Colombo, April 18, 1902.

SIR,—IN acknowledging the receipt of your letter No. 83 of the 12th instant, relative to the question of the Customs overtime fees, I am directed to forward to you a copy of the report of the Committee, of which you were a member, appointed to consider and report on the matter.

2. His Excellency the Governor has carefully perused the report of the Committee, but His Excellency regrets he cannot consider the recommendations made as likely to tend to a complete solution of the present unsatisfactory state of affairs, and as there appears to be little hope of further dealing with this matter in a satisfactory manner with the aid locally available, he is of opinion that it is advisable to refer it to an expert in Customs work, who will be obtained from England, for careful inquiry and report.

3. In the meantime I am to state that the Government cannot pledge itself to adopt the recommendations of the Committee in the matter of the scale of fees for working ships at night, but it has been decided that, pending the report of the proposed expert, the existing system of overtime charges should be maintained, and the difference between the fees actually recovered and the fees which would be recovered in the event of the shipping companies being allowed to exercise the option of selecting either of the scales of fees mentioned in the Committee's report should, after a certain date, be deducted and placed in deposit in a bank, to be eventually disposed of on the advice of the proposed expert. To enable you to calculate what this sum should be, I am to request you to call upon the various shipping agents to state which of the alternative scales of charges they are likely to adopt by preference, and to report to me early the result of your inquiries, in order that a date may be fixed from which the deduction should be made and the amount banked.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 9.

LETTER addressed by the Hon. the COLONIAL SECRETARY to the Hon. Mr. F. R. ELLIS, C.M.G.; A. S. PAGDEN, Esq.; the Hon. Mr. W. H. FIGG; STANLEY BOIS, Esq.; and W. SHAKSPEARE, Esq.

Colonial Secretary's Office,
Colombo, April 8, 1902.

SIR,—WITH reference to the report of the Committee, of which you were a member, appointed to inquire into and report on the question of the Customs overtime fees, I am directed to inform you that His Excellency the Governor has carefully perused the recommendations of the Committee, but His Excellency regrets he cannot consider them as likely to tend to a complete solution of the present unsatisfactory state of affairs, and he therefore is of opinion that it is advisable to refer the matter to an expert in Customs work for careful inquiry and report.

2. I am to inform you further that the Government cannot now pledge itself to adopt the recommendations of the Committee as to the scale of charges for working ships at night, but pending the report of the proposed expert the existing system of overtime charges will be maintained, and the difference between the fees actually recovered and the fees which could be recovered in the event of the shipping companies being allowed to exercise the option of selecting either of the scales of fees mentioned in the Committee's report will be deducted and placed in deposit. The disposal of this amount will be adjusted on the advice of the expert.

3. I enclose for your information a copy of a letter on this subject addressed to the Principal Collector of Customs.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 10.

The Hon. the COLONIAL SECRETARY to the SECRETARY, Chamber of Commerce.

No. 06700.

Colonial Secretary's Office,
Colombo, April 18, 1902.

SIR,—ADVERTING to your letter of the 26th February, 1902, and previous correspondence on the subject of the Customs overtime charges, I am directed by His Excellency the Governor to forward to you for the information of the Chamber of Commerce the accompanying copy of the report of the Committee consisting of the Hon. Mr. F. R. Ellis, the Hon. Mr. W. H. Jackson, Mr. A. S. Pagden, the Hon. Mr. W. H. Figg, and Messrs. Stanley Bois and W. Shakspeare, who were requested to inquire into and report on the subject.

2. The Governor has carefully perused the report of the Committee, but His Excellency regrets that he cannot consider the recommendations made as likely to tend to a complete solution of the present unsatisfactory state of affairs, and as there appears to be little hope of further dealing with the matter in a satisfactory manner with the aid locally available, His Excellency is of opinion that it is advisable to refer it to an expert in Customs work. His Excellency accordingly proposes to obtain such an expert from England to make careful inquiry into the matter and to report thereon.

3. I am to inform you further that in view of this decision the Government cannot now pledge itself to adopt the recommendations of the Committee as to the scale of fees for working ships at night, but pending the report of the proposed expert the existing system of overtime charges will be maintained, and the difference between the fees actually recovered and the fees which would be recovered in the event of the shipping companies being allowed to exercise the option of selecting either of the scales of fees mentioned in the Committee's report will be deducted and placed in deposit in a bank, to be eventually disposed of on the advice of the expert.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 11.

The SECRETARY, Chamber of Commerce, to the Hon. the COLONIAL SECRETARY.

Colombo, April 24, 1902.

SIR,—I HAVE the honour to acknowledge receipt of your No. 06700 of 18th instant on the above subject, which has been duly laid before my Committee.

2. Whilst glad to note that His Excellency the Governor is in accord with the shipping interest in considering the present state of affairs unsatisfactory, the Chamber feels that there must be reasons, both numerous and weighty, to necessitate on the part of Government so unusual a step as the rejection of the recommendations *unanimously* made by the Committee specially appointed to consider the subject, consisting as it did both of Officials and Unofficials.

3. On behalf of the Unofficial Members of that Committee it is desired to record the fact that no conditions whatever as to the manner in which the Government wished the question to be dealt with were put forward, neither were any papers submitted as a basis of discussion. The recommendations made therefore were *mainly* approved of by the Unofficials as effecting an immediate reduction in the amount payable to the Customs officers concerned, thus affording relief to *sifigle* steamers working overtime, whilst debarring the large companies (usually working a *number* of steamers at a time) from any participation in the reduction, it not being considered that they were entitled thereto. Furthermore, the adoption of the recommendations for one year would have given to all concerned an opportunity of recording data, at present non-existent, necessary for the *final* adjustment of the question.

4. So far as the outside public are concerned, this Chamber sees no necessity whatever for invoking the aid—doubtless at heavy expense—of an expert in Customs work, and considers that the aid locally available would be fully competent to deal with the question of Customs overtime. If, however, His Excellency the Governor has *finally decided* upon this course, I am to point out that there are then many other matters connected with the working of the port which might advantageously be submitted for such expert's consideration, and upon which this Chamber would desire to represent their views.

5. Meanwhile, however, the Chamber will esteem it a favour if the Government will furnish a statement showing full details of the reduced scale upon which Customs officers will be remunerated for their services as soon as the arrangement foreshadowed in the last paragraph of your letter under reply is given effect to, such statement to include also a memorandum showing the fixed pay of such officers, and the number and grade of the officers necessarily in attendance or on duty when one, two, or more steamers are working in each case.

6. It is thought that, if placed in possession of these particulars, it may be possible for the Chamber to submit a scheme which would meet the wishes of Government in affording a final and permanent settlement of the question; and it is respectfully desired therefore that the appointment of an expert may meanwhile not be actually made in case the scheme which the Chamber would like to submit to Government be approved of.

I have, &c.,
FRED. W. WALDOCK,
Secretary.

No. 12.

The Hon. the COLONIAL SECRETARY to the SECRETARY, Chamber of Commerce.

Colonial Secretary's Office,
No. 07518. Colombo, May 1, 1902.

SIR,—I AM directed to acknowledge the receipt of your letter of the 24th April, 1902, on the subject of the Customs overtime charges.

2. As regards the information desired in paragraph 5 of your letter, I am to state that it is not possible to furnish the information till it is known what proportion of the total proceeds on account of overtime charges will be placed in deposit in the bank; but, as at present proposed, the sums due as overtime fees to each Customs officer will at the end of each month be reduced *pro ratâ* according to the amount deposited in the bank.

3. The whole question of the Customs overtime charges is, however, still under the consideration of Government.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 13.

The SECRETARY, Chamber of Commerce, to the Hon. the COLONIAL SECRETARY.

Colombo, May 9, 1902.

SIR,—I HAVE the honour to acknowledge receipt with thanks of your letter No. 07518, dated 1st instant, on the above subject.

2. My Committee note that it is impossible at present to furnish the information asked for in paragraph 5 of my letter of the 24th ultimo.

3. In the meantime I am directed to respectfully inquire on what basis remuneration to Customs officers is now made for overtime duty, and what proportion such remuneration bears to their ordinary incomes; also the number of officers of each grade requiring to be on duty or in attendance upon one, two, or more steamers.

4. I am to state that it is the earnest hope of my Committee that an early and satisfactory solution of the present difficulty may be arrived at with Government.

I have, &c.,
FRED. W. WALDOCK,
Secretary.

No. 14.

The Hon. the COLONIAL SECRETARY to the SECRETARY, Chamber of Commerce.

Colonial Secretary's Office,
Colombo, May 10, 1902.

SIR,—IN continuation of my letter of the 1st instant on the subject of the Customs overtime charges, I am directed by His Excellency the Lieutenant-Governor to state for the information of the Chamber of Commerce that the main desire of the Government is to find some final and complete solution of the whole question of overtime charges; but that the report of the recent Committee seemed to the Government to present only a partial and probably temporary solution. If the Chamber of Commerce now has any definite and complete settlement to suggest, His Excellency the Lieutenant-Governor will be glad to give the fullest consideration to their views before taking any further steps in the matter.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 15.

The Hon. the COLONIAL SECRETARY to the PRINCIPAL COLLECTOR OF CUSTOMS.

Colonial Secretary's Office,
No. 91. Colombo, May 14, 1902.

SIR,—WITH reference to previous correspondence on the subject of the Customs overtime charges, I am directed to request you to furnish me with information as to the basis on which remuneration is now made to Customs officers for overtime duty, showing what proportion such remuneration bears to their ordinary income, and also as to the number of officers of each grade required to be on duty or in attendance upon one, two, or more steamers.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 16.

The SECRETARY, Chamber of Commerce, to the Hon. the COLONIAL SECRETARY.

Colombo, May 13, 1902.

SIR,—UNDER instructions from my Committee, I have the honour to acknowledge receipt of your further letter of the 10th instant on the above subject.

2. I am desired to ask you to be good enough to convey to His Excellency the Lieutenant-Governor the thanks of this Chamber for his offer to give the fullest consideration to their views before taking further steps in the matter.

3. In terms of my letter, however, of the 9th instant, I have the honour to point out the great difficulty which my Committee experience in framing propositions which would be likely to be acceptable to Government until they are in possession of the information asked for in respect of the present conditions obtaining at His Majesty's Colombo Customs.

I have, &c.,
FRED. W. WALDOCK,
Secretary.

No. 17.

The PRINCIPAL COLLECTOR OF CUSTOMS to the Hon. the COLONIAL SECRETARY.

No. 122. H. M. Customs,
Colombo, May 24, 1902.

SIR,—IN reply to your letter No. 91 of the 14th instant, I have the honour to state—

1. As to basis of remuneration, I annex copy of the Minute of 11th September, 1872, which determines the rate to be paid to the various officers. The proportion that this rate bears to income varies very greatly, for instance—

The Senior Landing Surveyor (the Deputy Collector) draws Rs. 7,000 to Rs. 9,000 per annum, and Rs. 3 per hour for overtime.

The Junior Landing Surveyor draws Rs. 5,000, and the same rate per hour.

Landing Waiters, whose salaries vary from Rs. 2,200 to Rs. 275 per annum, draw Re. 1·50 per hour.

Lockers and Tide Surveyors on about Re. 1 per diem draw 50 cents per hour, and Tide Waiters who draw from Rs. 17·50 to Rs. 10 per mensem draw 25 cents an hour.

2. As to the number of officers on duty for a steamer working in the port, this varies according to the nature of the service on which the steamer is employed; *e.g.*, if she be merely bringing grain to this port and passing on to other coast ports, one warehouse generally suffices for the work; in which case one Landing Waiter and two Tide Waiters are the only officers kept on duty, the former to supervise generally in the warehouse, and the two latter to tally the cargo from boat to shore.

On the other hand, if it be a steamer from Europe with a miscellaneous cargo and going on to other ports, she will work her import cargo into one warehouse, and may probably take or land cargo from both the Government and Wharfage Company's Transhipment Warehouses, as well as produce from the Export Warehouses. This entails the opening of four separate warehouses and the employment of four Landing Waiters, eight Tide Waiters, and, if the export cargo be heavy, two clerks whose duty it is to register all goods exported as they pass through the warehouse.

3. As to supervision, for one line of steamers one superior officer is on duty, for more than one line two are on duty as long as more than one line works, while the supervision of the export cargo is in the hands of the Supervisor of Exports.

I am, &c.,

W. H. JACKSON,
Principal Collector.

Enclosure in No. 17.

Minute.

HIS Excellency the Governor is pleased to direct that the following scale of allowances shall be paid to the officers of the Customs Department at Colombo by parties requiring the performance of duties by them on Sundays and holidays and beyond the legal hours, viz.:—

1. For attendance on Sundays and holidays:—

	Rs.	c.	
Landing Surveyor	10	0	the day
Landing Waiters and Clerks	5	0	do.
Lockers, Tide Surveyors	1	75	do.
Tide Waiters	1	25	do.

2. For attendance beyond legal hours of 6 A.M. and 4 P.M.:—

Landing Surveyor	3	0	per hour of the visits he may be required to make
Landing Waiters and Clerks	1	50	per hour
Lockers, Tide Surveyors	0	50	do.
Tide Waiters	0	25	do.

3. For superintending within the legal hours the transhipment of goods from one vessel to another:—

Landing Waiters	2	50	the day
Lockers, Tide Surveyors	1	25	do.
Tide Waiters	0	75	do.

And for periods beyond legal hours, the rates per hour.

4. When application is made for such services, the Collector, if he sees fit to sanction the same, should require a deposit to be made, sufficient to cover the expenses likely to be incurred.

5. When more than one vessel may be so working, the expenses for extra attendance of officers shall be divided amongst all parties availing themselves of their services.

By His Excellency's command,

HENRY T. IRVING,
Colonial Secretary.

Colonial Secretary's Office,
Colombo, September 11, 1872.

No. 18.

The PRINCIPAL COLLECTOR OF CUSTOMS to the Hon. the COLONIAL SECRETARY.

No. 124. H. M. Customs,
Colombo, May 26, 1902.

SIR,—IN reference to your letter to my address No. 65/06700 of 18th ultimo, and letter of 1st May on the same subject to the Secretary, Chamber of Commerce, I have the honour to state that I have now completed preparation of the list of firms desirous of paying overtime in the six-rupee and four-rupee scales respectively.

2. I propose to commence funding the difference of fees, as laid down in paragraph 3 of your letter No. 65, from the 1st proximo, but as this will entail a reduced rate of payment to certain officers, I beg to inquire whether the rates which are now paid under authority of Government Minute dated 11th September, 1872, can be varied without a fresh Minute of Government.

I am, &c.,
W. H. JACKSON,
Principal Collector.

No. 19.

The Hon. the COLONIAL SECRETARY to the SECRETARY, Chamber of Commerce.

No. 09483. Colonial Secretary's Office,
Colombo, June 6, 1902.

SIR,—WITH reference to your letters of the 9th and 13th May last on the subject of the Customs overtime charges, I am directed by the Lieutenant-Governor to forward for the information of the Chamber of Commerce the accompanying copy of a letter from the Principal Collector of Customs as to the information desired in paragraph 3 of your letter of the 9th May; and in this connection I am to inform you that the tentative measure announced to your Chamber in the 3rd paragraph of my letter to you of the 18th April last will be in force as from the 1st instant.

2. I am to add that His Excellency hopes that your Chamber will still, and at as early a date as possible, submit the proposition as to a more complete alternative measure to which reference is made in your letter of the 13th May.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 20.

The Hon. the COLONIAL SECRETARY to the PRINCIPAL COLLECTOR OF CUSTOMS.

No. 108. Colonial Secretary's Office,
Colombo, June 6, 1902.

SIR,—IN acknowledging the receipt of your letter No. 124 of the 26th May, 1902, I am directed to inform you that His Excellency the Lieutenant-Governor has been pleased to approve the adoption of the tentative measure sanctioned by my letter No. 65 of the 18th April, 1902, in respect of Customs overtime recoveries, as from the 1st instant.

2. As regards your suggestion for the variation of the Minute of 11th September, 1872, I am to remind you that the fees recovered are to be, in part, funded, pending a settlement of the general question, and that hereafter the amount in deposit in the fund may possibly be paid, in part or in whole, to the Customs officers; and to state that, as there is only a tentative suspension and not a cancellation of the present rates of Customs fees, the alteration of the Minute in question seems unnecessary.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 21.

The Hon. the COLONIAL SECRETARY to the SECRETARY, Chamber of Commerce.

No. 09483. Colonial Secretary's Office,
Colombo, July 26, 1902.

SIR,—I AM directed to invite your attention to paragraph 2 of my letter of the 6th June, 1902, on the subject of the Customs overtime charges, and to inquire whether the Chamber of Commerce will soon be in a position to furnish the Government with the promised statement of its views.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 22.

The SECRETARY, Chamber of Commerce, to the Hon. the COLONIAL SECRETARY.

Colombo, July 29, 1902.

SIR,—I HAVE the honour to acknowledge receipt of your No. 09483, dated the 26th instant, relative to the above subject, and to inform you that the report of the Sub-Committee appointed to deal with it is expected to be in the hands of the Chamber at an early date. My Committee will then lose no time in submitting its views for the favourable consideration of Government.

I have, &c.,
FRED. W. WALDOCK,
Secretary.

No. 23.

The Hon. the COLONIAL SECRETARY to the SECRETARY, Chamber of Commerce.

Colonial Secretary's Office,
Colombo, September 18, 1902.

SIR,—WITH reference to your letter of the 29th July, 1902, on the subject of the Customs overtime charges, I am directed to state that the Lieutenant-Governor will be glad to know when an expression of the views of the Chamber of Commerce may be expected.

2. I am to add that under instructions from the Secretary of State for the Colonies His Excellency the Lieutenant-Governor must take prompt action in the matter, and would be glad to have the promised statement of the Chamber of Commerce before so doing.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 24.

The SECRETARY, Chamber of Commerce, to the Hon. the COLONIAL SECRETARY.

Colombo, September 24, 1902.

SIR,—I HAVE the honour to acknowledge receipt of your letter of the 18th instant.

I am directed by my Committee to again express their regret at the delay which has attended the completion of their proposals, which has been due to the large mass of material which they have collected on the subject. I am to say that the report of the Sub-Committee of the Chamber is expected to be in the hands of the General Committee early next week, when they will lose no time in placing their views before Government.

I have, &c.,
FRED. W. WALDOCK,
Secretary.

No. 25.

The SECRETARY, Chamber of Commerce, to the Hon. the COLONIAL SECRETARY.

Colombo, October 7, 1902.

SIR,—WITH reference to your various communications asking for a final expression of the views of this Chamber upon the above subject, I have the honour to express much regret that they have been so long delayed, owing mainly to the fact that references to other ports for information bearing on the question had to be repeated before all needful details could be elicited.

2. Before, however, discussing the bearing which the usage at other ports may have upon the system here, it will be useful to recapitulate briefly what that system is, and how the situation at present stands.

3. (*a*) The charge for working after hours now levied at the Port of Colombo is Rs. 6 per hour, the working day running from 6 A.M. to 5 P.M. on all week days except Saturday, when it is from 6 A.M. to 3 P.M.

(*b*) Sundays are reckoned from 6 A.M. to midnight, and the charge is Rs. 35 from 6 A.M. to 4 P.M. and Rs. 6 per hour thereafter, in addition to the fine of Rs. 200 on each steamer working.

(*c*) If more than one steamer belonging to the same company is working at a time the charge is the same, except as regards the Sunday fine of Rs. *200* which *each steamer* pays. The P. & O. and Messageries mail steamers are, however, exempt from payment of Sunday fees.

4. On 14th August, 1901, this Chamber asked Government whether any steps had been taken to carry out the recommendations made in the Wharf Commission Report of September, 1897, in respect of restricting the charges made to the amount required to cover the actual expenditure, and to divide it equally among the ships working, and further asked for a return of the amounts collected and an account of their appropriation. This request was repeated by the Hon. the Mercantile Member in Council at the sitting of 25th October, 1901, and in reply the Colonial Secretary laid on the table the desired returns, at the same time stating that the adoption of the recommendation made in the report of 1897 was impracticable in its existing form owing to the Government having given an undertaking to certain of the shipping companies at the time they transferred their business from Galle to Colombo not to charge more to these companies (than Rs. 6 per hour), no matter how many of their ships they might be working at a time, but so far as he (the Hon. the Colonial Secretary) was aware, there was no objection on the part of Government to restricting the collections to the amount actually required to cover the ordinary expenditure.

5. The statements of overtime collected show that returns from this source were as follows:—

	Rs.	c.
In 1899	118,793	76
1900	163,110	43
1901 (to 31st October)	123,593	92

the bulk of which was paid to the officers on duty after hours, part also going to defray the cost of electric lighting. This Chamber, however, in their letter of 20th November, 1901, took exception to three points:—

(*a*) To the heavy surplus available *after* meeting all those expenses.
(*b*) To the fact that certain items had, in their opinion, been improperly debited to the fund.
(*c*) To the fact that the amounts to Customs officers were excessive; and they recommended—
(*d*) That fees should only be charged for the time the steamer agents apply to work; and
(*e*) That the excessive amounts paid to officers in attendance should be reduced.

6. On the 17th February, 1902, His Excellency the Governor was good enough to receive a deputation of Members of this Chamber on the subject, as the outcome of which the Hon. Mr. W. H. Figg, and Messrs. Stanley Bois and W. Shakspeare, who composed the deputation, were invited to meet the Hon. Messrs. F. R. Ellis and W. H. Jackson and Mr. A. S. Pagden in order to discuss the question and to effect a settlement.

7. A meeting took place on 21st March, and a provisional arrangement to hold good for a year, after which it was suggested the question might be finally reconsidered in the light of the figures then available, was unanimously recommended. This arrangement provided that the steamer companies be allowed the option of paying Rs. 6 per hour for the working of any number of ships belonging to them, or to pay Rs. 4 per hour for each ship that works, and that, as this would cause a reduction in the total amount paid on account of overtime, it should be accompanied by a proportionate reduction (estimated at 33 per cent.) in the overtime allowance paid to officers.

8. These proposals were not, however, looked upon by His Excellency the Governor as likely to tend to a complete solution of the existing unsatisfactory state of affairs, and in a communication addressed to the Chamber under date 18th April it was stated that His Excellency was of opinion that it was advisable to refer the matter to an expert in Customs work, and accordingly proposed to obtain such an expert from England to make careful inquiry into the matter and to report thereon. Meanwhile Government proposed to collect overtime charges on the *existing* basis, crediting, however, the difference between the two scales to a special account in the bank to be eventually disposed of on the advice of the expert.

9. In reply, under date 24th April, this Chamber pointed out that the rejection of proposals made unanimously by a specially appointed Committee comprising both Officials and Unofficials was an unusual course, and gave in some detail the grounds on which the Unofficial Members had approved of the proposals. They deprecated the heavy expenditure involved should the services of an expert be invoked, and considered that the aid locally available would be quite competent to deal with the question. They further asked for additional returns, and stated their desire to submit a further scheme which might meet with the approval of Government as affording a *permanent* solution of the question, and respectfully begged that the appointment of an expert might not be proceeeded with meanwhile.

10. Under date 1st and 4th May communications were exchanged regarding the required returns; on 10th idem Government advised the Chamber that His Excellency the Governor had agreed to postpone action pending receipt of the Chamber's further views; and on the 6th June the required information contained in a letter from the Principal Collector of Customs to Government dated 24th May was communicated.

11. Since then the Chamber have been in correspondence with the Chambers of Commerce at Bombay, Calcutta, and Madras, and also with the agents of the leading lines of steamers calling there, in order to ascertain how matters stand, and it may be advantageous now to indicate briefly the lines on which overtime work is undertaken at these ports.

12. In Calcutta the main points are as follows:—

(*a*) The working hours are 7 A.M. to 4 P.M. for steamers at the jetty or Kidderpore Dock, and 8 A.M. to 5 P.M. for those in the stream: a nine hours' day.
(*b*) The average cost of overtime is only Re. 1 per hour, the all-night fee being Rs. 15.
(*c*) The higher Customs officers do *not* participate in overtime fees, but only the preventive officers in charge, who draw from Rs. 100 to Rs. 300 per month.
(*d*) Their average overtime amounts to between Rs. 50 and Rs. 60 per month, *less* 25 per cent. deduction, which is accumulated at the Customs-house in the form of a Provident Fund.

13. At *Madras*—

(*a*) The working hours are from 6 A.M. to 6 P.M., or a 12 hours' day.
(*b*) The average cost of working overtime is Re 1·25 per hour.
(*c*) The higher Customs officials, such as the Deputy Collector, do *not* participate in overtime fees, and the remuneration is restricted to the subordinate officials actually in attendance, there being no regulations requiring the attendance of the Deputy Collector or other high official.
(*d*) It has not been possible to ascertain the average amount earned per mensem by the officers in attendance, but in view of the low rate charged to steamers it cannot be large.

14. At *Bombay*—

(*a*) The working day is from 6 A.M. to 6 P.M.
(*b*) The cost of working overtime is Rs. 7 up to midnight and Rs. 14 all night, which is at the rate of between Re. 1 and Re. 1·25 per hour.
(*c*) Officers drawing over Rs. 3,000 a year, although required to work after hours at times, may not draw overtime allowances in connection with the discharge of cargo.
(*d*) There is, furthermore, a departmental restriction of the preventive service that preventive officers are not allowed to earn in overtime fees more than a sum equal to their pay.

15. It is proper to add that in all these ports the system of check instituted by Government for the protection of their revenue appears to be based upon a somewhat different principle to Colombo, the main points of difference being—

(*a*) That in Calcutta, Madras, and Bombay one or more Customs preventive officers are stationed on board the steamers working, whereas here the check is exercised by the officers at the jetties, who tally into the warehouses.
(*b*) That dutiable cargo may be kept in boats all night and landed the next day without charge to the steamers. Here all cargo is supposed to be warehoused on the day of landing, and if such cargo is kept in boats by special permission of the Principal Collector, it is liable under Ordinance to pay Rs. 6 for each hour of such detention, though in practice, and when it can be shown that the cargo *could* not well be landed, we believe these terms are somewhat reduced.

(*c*) There appears to be a permanent preventive staff on shore, for whose services no charge is made to the steamers, but who are supposed to see that no smuggling takes place. Here we take it that the Harbour Police and the ordinary Police on shore fulfil practically the same function.

16. Based upon the above considerations, the conclusion arrived at by this Chamber is that the cost of working cargo after hours at this port can be largely reduced to the steamers concerned—

(*a*) By doing away with the present charge of Rs. 6 per hour, and charging *each* steamer the *actual* expenses incurred for officers in attendance and electric current consumed after hours.

(*b*) In the case of two or more steamers working after hours, dividing such expenses equally amongst them *pro ratâ* according to the number of hours worked.

(*c*) This will obviously involve Government withdrawing the undertaking arrived at with certain companies twenty years ago, referred to in paragraph 4.

All this the Chamber are prepared to recommend, it being borne in mind, however, that lighting will only be incurred when cargo is landed into *Government* warehouses, the cost of lighting in respect of cargo landed into the premises of the Ceylon Wharfage Company being as heretofore met by *them*, and consequently in such cases only the services of officers on duty will be chargeable. In short, it is to be understood that only the additional lighting, necessitated by the specific overtime work, paid by Government, shall be added to the charge for officers in attendance.

17. This arrangement would at once dispose of the Chamber's objections (*a*) and (*b*) referred to in paragraph 5, and we imagine from the correspondence which has already taken place that Government will so far be in accord with this Chamber. It is, however, as regards objection (*c*) *further* recommended, that the scale of remuneration at present payable by Government to Customs officers in attendance after hours be revised with a view to its ultimate reduction by at least 50 per cent. This revision the Chamber conceives it to be the business of Government to conduct and settle with its officers in the light of what is set out above as usual elsewhere, but it might be desirable to make the reduction gradually during a period of, say, one or two years, if investigation showed that injustice might otherwise be done. It is, however, strongly felt that, in view of the facts stated in section (*c*) of paragraphs 12, 13, and 14, and of the excessive overtime earned by Customs officers during the last few years over and above their fixed salary (due to an increase in the steamers working overtime, which has *not* involved a proportionate increase in the work), a reduction of *50 per cent.* might easily be effected. It does not of course follow that *every individual officer* will receive 50 per cent. less overtime, but that by a re-adjustment, and possibly a reduction in the number of officers supposed to be on duty when overtime work is proceeding, such a reduction *in the aggregate* may be made.

18. Up to the present we have not discussed an objection formerly raised by this Chamber and referred to in section (*d*), paragraph 5, namely, that fees should only be charged from the hour the agents applied to commence work. For instance, a steamer is expected at 1 A.M. on Sunday, and the agents apply to work accordingly; we still contend that it is a hardship that they should have to pay Rs. 6 per hour from 3 P.M. on Saturday the previous day. We are, however, prepared to waive this point in view of the strongly expressed views of the Principal Collector of Customs on the subject, but would nevertheless point out that it is a factor tending greatly to mislead inquirers into the question, as apparently showing that Customs officers are to work overtime for a far greater number of hours than is really the case, for when awaiting the arrival of a steamer, in such an instance as the above, they are able to rest and sleep, and even when landing commences the nature of the work does not demand by any means that mental strain which might render it a question whether the officers should be *allowed* to work overtime to the extent they *apparently* do. We think it well to mention this, as we believe that a duplicate staff has been suggested as necessary on the above grounds, and we are emphatically of the opinion that such a step is uncalled for, and would neither tend towards efficiency nor economy.

19. Trusting that the above conclusions, which have only been arrived at after very careful deliberation, will assist in enabling this vexed question to be settled to the mutual satisfaction of the Government and those whose interests the Chamber represents.

I have, &c.,

FRED. W. WALDOCK,
Secretary.

No. 26.

The Hon. the COLONIAL SECRETARY to the PRINCIPAL COLLECTOR OF CUSTOMS.

No. 212.

Colonial Secretary's Office,
Colombo, October 25, 1902.

SIR,—WITH reference to my letter No. 108 of the 6th June, 1902, and previous correspondence on the above subject, I am directed by His Excellency the Lieutenant-Governor to request you to forward as soon as possible the document, which you promised His Excellency to produce, containing full particulars about the undertaking given by Government to certain shipping companies not to charge them more than Rs. 6 per hour, irrespective of the number of ships they may have worked.

I am, &c.,

A. G. CLAYTON,
for Colonial Secretary.

No. 27.

The PRINCIPAL COLLECTOR OF CUSTOMS to the Hon. the COLONIAL SECRETARY.

No. 250. H. M. Customs,
Colombo, October 29, 1902.

SIR,—IN reference to your letter No. 212/018010 of the 25th instant, I have the honour to annex a copy of my letter to you, No. 16 of 25th January, 1887, which states the position in detail.

I am, &c.,
K. MACLEOD,
for Principal Collector.

Enclosure in No. 27.

The PRINCIPAL COLLECTOR OF CUSTOMS to the Hon. the COLONIAL SECRETARY.

No. 16. Customs, Colombo,
January 25, 1887.

SIR,—I HAVE the honour to annex the statement called for by your letter of 10th July last.

2. I very much regret the delay which has taken place in forwarding this return and the report required by the 2nd paragraph of your letter. It has been due to heavy pressure of work owing to my having the charge of another Department on my hands and of a Commission, and partly also to the state of my health, which has at times entirely precluded me from working, except at the office, where the calls upon my attention in matters requiring instant decision are so numerous and incessant as to leave hardly any time for work demanding undisturbed and careful consideration.

3. As regards the statement itself, the first remark I have to make is, that the Principal Collector as such has drawn no fees on account of "overtime" since 1884. The amount of Rs. 283·50 drawn by Mr. Paterson in 1885 was earned during the absence of the Deputy Collector, part of whose work was undertaken by the Principal Collector himself. The Principal Collector is not, in my opinion, entitled to fees, no matter how often he may visit his officers to see that they are doing their duty. The Government Minute regulating the scale of payment makes no mention of any officer higher in rank than a Landing Surveyor (an office held with his own by the Deputy Collector), and it is improper that an officer who has to decide whether any, and, if any, what, charge should be made should himself participate in the amount so recovered from the Mercantile community.

4. The fees for overtime received by the Deputy Collector and Landing Surveyor for the year 1885 are obtainable from the various sums appearing against the first five names on the list. An analysis shows that the amount accruing to the Deputy Collector during that year was Rs. 3,263·50 and the Landing Surveyor Rs. 3,065, and for the first six months of 1886 Rs. 1,988 and Rs. 1,447 respectively.

5. The sums under the heading "Fines, Forfeitures, and Proceeds of Undervalued Goods" are paid under the authority of the 119th section of the Customs Ordinance and of section 43 of the same Ordinance. As regards proceeds of the sale of undervalued goods taken for the use of the Crown, officers are allowed no share should the result of the sale be that the goods realize less than 15 per cent. above the importer's valuation. This rule was suggested by the Customs Commission of 1873, and laid down by the Colonial Secretary's letter No. 147 of 19th September, 1873.

6. The shipping fees are regulated by the Merchant Shipping Ordinance, No. 7 of 1863, which merely gives effect to the Imperial Merchant Shipping Act, and the Principal Collector, in his capacity of Shipping Officer, is really a servant of the Board of Trade, to whom he renders accounts, and by whose rules he is guided. The same may be said of the Light Dues. The fees under this head are divided between the Collector and the clerk in the proportion of three to one. In the case of the shipping fees the clerk takes half. The occasional fee of Rs. 10·50 for holding inquiries about wrecks is hardly worth consideration, and the same may be said of fees for certified copies of documents, half of which are apportioned to the clerk.

GENERAL REPORT AS TO OVERTIME.

7. (*a*) *As to the Authority.*—The practice is well established in the English Customs; no special legislative authority exists in Ceylon, but it has received the sanction of the Government at various times, and Minutes have been issued regulating the charges. The last Minute sanctioning the present scale of allowances is that of 11th September, 1872 (see also Minute of 4th October, 1870, as to steamers working during the night, and especially as to Sunday charges).

(*b*) *How the Allowances are paid.*—They are paid by the ship owners or their agents on their request to be allowed the privilege of working beyond legal hours, that is, earlier than 6 A.M. and later than 4 P.M. These hours are fixed by sections 28 and 48 of the Customs Ordinance, No. 17 of 1869. Previous to the report of the Customs Commission of 1873 the actual allowances due to the officers employed to supervise the working of each particular ship were paid on a statement sent in to the agents. In consequence of one officer being able to supervise the work of more than one vessel, these charges became irregular and uncertain in amount, giving rise to dissatisfaction amongst the agents, and on the recommendation of the Commission a consolidated charge of Rs. 6 per hour per ship was sanctioned by the Government (see paragraph No.—— of letter of Colonial Secretary to Principal Collector of Customs, No. 147 of 19th September, 1873). This consolidated charge applied to this port only, and when Colombo was adopted as the Ceylon port of call by the P. & O. and M. M. Companies, their vessels were paying the old rates, viz., the actual allowances to the officers employed; and, further, the Galle scale of allowances is lower than that at Colombo, being regulated by the Minute of 30th November, 1861; the Minute of 11th September, 1872, applies to Colombo only.

An agreement was come to between the Government and the agents of these companies on the understanding that they should be subjected to no higher charges at Colombo than they had paid at Galle, and the outcome of the arrangement has been that for the charge of Rs. 6 per hour the P. & O. and M. M. Companies can work as many vessels as they please, all other companies paying Rs. 6 per ship per hour.

(*c*) *Result of the Consolidated Charge of Rs. 6 per Ship per Hour.*—The result has been that on 30th September last the amount paid by the agents had proved sufficient, not only to pay the officers employed, but to create a surplus of Rs. 49,009. Of this sum, Rs. 32,299 had been at various dates from June, 1875, to January, 1883, paid over to the Benevolent Fund, and Rs. 16,710 remained to the credit of the Overtime Fund.

(*d*) *Suggestions.*—I cannot recommend that the sum of Rs. 32,299 paid over to the Benevolent Fund, although there is no record of any authority from the Government for the transfer, be repaid to the Overtime Fund. To recommend any attempt at the restoration of this sum or of the Rs. 16,710 remaining in the Overtime Fund to the agents would be out of the question. In the first place, it is obvious that all parties to the arrangement must have been aware that the consolidated charge was in all probability at least slightly more than enough to pay the actual expenses incurred, and the agents were willing to pay for the convenience afforded. In the next, to apportion small sums recovered on account of separate ships for a period of upwards of twelve years would be a task requiring immense time and labour; and besides this, in many cases the money could not be repaid to those persons who would be really entitled to it; and there is the question of interest, most of which is appropriated to payments in the way of pensions from the Benevolent Fund, which it would be unjust to stop.

As regards this surplus, the only suggestion I can make is that the Benevolent Fund should be allowed to keep what it has got, and I can see no better use for the balance of Rs. 16,710 than to pay it over to the same fund, which is now completely under the control of the Government, and is a most useful institution.

As regards the consolidated charge itself, it is evident that a reduction is called for, but in dealing with this the utmost caution is necessary.

I have come to the conclusion, after careful thought and great deliberation in conjunction with Mr. Dunlop, the Deputy Collector, whose experience has been of the greatest service to me in the decision of this difficult question, that it would be safe to reduce the Sunday charge, which is at present Rs. 60, at the rate of Rs. 6 per hour for the ten hours between 6 A.M. and 4 P.M., to Rs. 35, retaining the rate of Rs. 6 per hour for work later than 4 P.M.

I also recommend that the privilege of working two or more ships for the single charge of Rs. 6 per hour enjoyed by the P. & O. and M. M. Companies should be extended to all companies alike, but not that firms who may be agents of more than one owner should be allowed to work two or more ships belonging to different owners for a single rate.

(*e*) The accounts have not hitherto been kept, though accurately kept, in a manner which enables me to estimate the effect of this charge with absolute accuracy, but there is no doubt that the reductions above recommended will leave a margin after payment of all officers. Henceforward an analysis of the accounts will be recorded daily, and it will be easy to judge to which items, if to any, a further reduction should be applied.

Had it not been for the concession already made to the P. & O. and M. M. Companies, I should have preferred an amendment in the form of a reduced consolidated rate of payment, separate payments being required for each ship, and this undoubtedly would be the fairest way of levying the charge. The present system greatly favours two companies; the adoption of the alteration now recommended will reduce the inequality, but will not bring all owners to the same level. The concession, however, has been made and cannot be withdrawn. The proposed change is in the direction of equality, extending as it does the concession to all in a position to take advantage of it. Though the British India Company, for instance, who pay more for "overtime" than the P. & O. or any other company, have agreed to these charges, the charges themselves were to pay for the attendance of officers, and it is only just that when experience shows that these charges are far heavier than is necessary for this purpose a reduction should be made. The accumulation of a surplus is due to the fact that an increase in the number of ships does not require a proportionate increase in the number of officers employed, and to it this company is the principal contributor.

There is an additional advantage that an approach to perfect equality having been made, any further reduction found possible would naturally be in the consolidated rate per hour.

As regards the disposal of the excess remaining after payment of officers, the suggestions I have made, if adopted, will reduce the surplus to an inconsiderable amount, which may fairly be paid as heretofore to the Benevolent Fund.

I have no suggestions to make as to any alteration in the scale of allowances for overtime work settled by the Minute of 11th September, 1872. Questions had arisen previous to my appointment regarding the interpretation to be put on the following words:—

"For attendance beyond the legal hours of 6 A.M. and 4 P.M.
"Landing Surveyor Rs. 3 per hour of the visits he may be required to make."

The interpretation which seemed to me to be right I gave effect to by an order, the substance of which was that the charge was to be per hour for the number of hours within which the officer paid visits, it not being necessary that the officer should pay a visit or inspection in the course of every hour, but that a reasonable number of visits should be paid and at irregular intervals.

I am, &c.,

G. S. WILLIAMS,
Principal Collector of Customs.

No. 28.

The Hon. the COLONIAL SECRETARY to the SECRETARY, Chamber of Commerce.

Colonial Secretary's Office,
No. 018010. Colombo, January 24, 1903.

SIR,—IN reply to your letter of the 7th October last, I have the honour to inform you that His Excellency the Governor has very carefully considered the proposals contained in your letter under reference, and is disposed to concur generally in the views therein expressed.

2. With regard to the proposal of the Chamber that ships be charged actual expenses only, that is, the overtime fees paid to the officers in attendance, plus the cost of the electric current consumed after hours, to be divided *pro ratâ* according to the number of vessels working overtime, I am directed to state that this suggestion would involve a somewhat complicated calculation in each case. It might, moreover, be objected to by the agents of the P. & O., the Messageries, the Norddeutscher

Lloyd, and the British India Companies, who now pay Rs. 6 an hour irrespective of the number of vessels working.

3. The simpler course appears to His Excellency to be the reduction of the rate from Rs. 6 an hour to Rs. 4, whilst leaving to those companies who desire it the option of paying Rs. 6 an hour, as at present, for any number of ships working overtime.

4. It appears, however, to His Excellency that the number of hours for which overtime is charged is of greater importance than the rate, though the Chamber does not deal with this, "in view of the strongly expressed opinion of the Principal Collector of Customs." In this matter Mr. Jackson was not authorized to express the view of Government, and His Excellency is of opinion that there can be no finality to this vexed question until the point is determined.

5. One result of the present system is to make it appear that Customs officers are constantly on overtime duty for thirteen to fifteen hours consecutively—obviously a physical impossibility. In order to remove this erroneous impression, and at the same time to reduce the expenses for night working, His Excellency is of opinion that where an application is made to work from midnight the overtime charges should be levied from 10 P.M., and not from 5 P.M., or 3 P.M. on Saturdays, as at present.

6. His Excellency further concurs in the opinion expressed by the Chamber as to the excessive amount of fees for overtime paid to certain Customs officers. The changes already indicated will necessarily reduce those fees, but to prevent the possibility of such fees reaching amounts out of proportion to the salaries drawn, His Excellency proposes to limit them in the case of officers drawing annually Rs. 2,000 and upwards to the amount of their salary. In the case of subordinate officers drawing under Rs. 2,000 limits will be fixed at Rs. 500, Rs. 1,000, and Rs. 2,000 respectively, according to the class they have attained and the pay they are receiving.

7. To sum up the decisions at which Government has arrived—

(1) The charge for overtime is reduced from Rs. 6 to Rs. 4 an hour per vessel. The companies who desire to retain the existing rate of Rs. 6 an hour for any number of vessels to be allowed to do so.

(2) Agents desiring to work single ships from midnight onwards to be charged from 10 P.M., instead of, as at present, from 3 P.M. on Saturdays, 4 P.M. on Sundays, and 5 P.M. on other days. This will mean a reduction of the existing charges of Rs. 78 – Rs. 90 (thirteen to fifteen hours at Rs. 6 an hour) to Rs. 32 (eight hours at Rs. 4 an hour).

(3) The overtime fees paid to Customs officers not to be allowed to exceed certain specified limits.

8. His Excellency trusts that the decision which the Government has thus arrived at will be accepted as an equitable and definite settlement of the question of Customs overtime charges.

I am, &c.,

A. G. CLAYTON,
for Colonial Secretary.

No. 29.

The SECRETARY, Chamber of Commerce, to the Hon. the COLONIAL SECRETARY.

Colombo, February 10, 1903.

SIR,—I HAVE the honour to acknowledge receipt of your No. 018010 of the 24th ultimo on the above subject, and am instructed to state that the Committee of this Chamber, having given same their most careful consideration, are prepared to accept the decision at which the Government have arrived.

I am at the same time directed to request that you will be so good as to convey to His Excellency the Governor the thanks of this Chamber for the courteous manner in which he has dealt with this subject, which is of so much importance to the Mercantile Community.

I have, &c.,

FRED. W. WALDOCK,
Secretary.

No. 30.

The Hon. the COLONIAL SECRETARY to the PRINCIPAL COLLECTOR OF CUSTOMS.

No. 28.

Colonial Secretary's Office,
Colombo, February 19, 1903.

SIR,—WITH reference to my letter of the 24th January last to the Secretary, Chamber of Commerce, a copy of which was sent for your information, on the subject of the Customs overtime charges, I am directed by His Excellency the Governor to inform you that the Chamber of Commerce has accepted the decision of the Government contained in that communication, and to instruct you to take steps to give effect to the decision arrived at.

I am, &c.,

A. G. CLAYTON,
for Colonial Secretary.

No. 31.

The Hon. the COLONIAL SECRETARY to the SECRETARY, Chamber of Commerce.

No. 02914.

Colonial Secretary's Office,
Colombo, February 20, 1903.

SIR,—WITH reference to your letter of the 10th instant on the subject of the Customs overtime charges, I am directed to inform you that the Principal Collector of Customs has been instructed to take steps to adopt the arrangement arrived at in the matter.

I am, &c.,

A. G. CLAYTON,
for Colonial Secretary.

XXIV.—1903.

CORRESPONDENCE

RELATING TO THE

REMOVAL OF ROCKS ON THE KADUGANNAWA INCLINE.

(In continuation of Sessional Paper XIII. of 1903.)

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 30 cents.

1903.

THE KADUGANNAWA INCLINE.

No. 1.

Telegram from the CROWN AGENTS FOR THE COLONIES to the Hon. the COLONIAL SECRETARY.

March 24, 1903.

CONSULTING ENGINEERS consider Oliver's opinion, from his knowledge of country and experience, superior to any engineer we could send out, except possibly Waring. They know of no specialists in rock decay. They have studied Oliver's reports to them and consider his conclusions generally sound, and think the expense of sending any one out unnecessary.

No. 2.

Telegram from Governor the Right Hon. Sir J. WEST RIDGEWAY, G.C.M.G., K.C.B., K.C.S.I., to His Excellency the VICEROY, Simla.

March 27, 1903.

ROCK movements are threatened at a certain point of our mountain railway. Can your Excellency kindly lend us any one experienced in such matters to examine and report?

No. 3.

Telegram from SECRETARY, GOVERNMENT OF INDIA (Revenue Department), to Governor the Right Hon. Sir J. WEST RIDGEWAY, G.C.M.G., K.C.B., K.C.S.I.

No. 1,156. April 13, 1903.

YOUR telegram of 27th instant to Viceroy, examination mountain railway: services of Middlemiss, Senior Superintendent, Geological Survey of India, who has been reported qualified for work, can be spared probably at once, but it has not yet been possible to receive reply from him; inclusive monthly salary of Rs. 1,500 and actual travelling expenses. It is presumed that inquiry not likely to last for more than two months. Please telegraph whether his deputation on these terms will be accepted.

No. 4.

Telegram from the Hon. the COLONIAL SECRETARY to SECRETARY, Government of India (Revenue Department).

April 16, 1903.

REFERRING to your telegram of 13th April, we accept your proposals regarding services of Middlemiss with thanks. When is it expected that he will arrive Colombo? The inquiry will probably not exceed a fortnight.

No. 5.

The Hon. the COLONIAL SECRETARY to the GENERAL MANAGER, Ceylon Government Railway.

Colonial Secretary's Office,
Colombo, March 27, 1903.

Kadugannawa Incline, Blasting Operations on.

SIR,—I AM directed to inform you that a vote of Rs. 45,000 (on account) was taken at the last meeting of the Legislative Council to meet expenditure in connection with the above service, and I am to authorize you to include the amount in your Supplementary Estimates for the current year.

I am, &c.,

A. G. CLAYTON,
for Colonial Secretary.

No. 6.

The GENERAL MANAGER, Ceylon Government Railway, to the Hon. the COLONIAL SECRETARY.

General Manager's Office,
No. 352. Colombo, April 2, 1903.

Preliminary Survey for Tunnels on Kadugannawa Incline.

SIR,—WITH reference to recent conversation with His Excellency the Governor, I have the honour to state that Mr. Oliver has inquired of Mr. Edwards as to whether he is willing to stay in the Island to undertake a preliminary survey in connection with the proposed tunnelling operations, but as that gentleman cannot remain, Mr. Oliver suggests that the work should be entrusted to Mr. Firbank of his Department, who can carry it out satisfactorily. I concur in Mr. Oliver's recommendation, and if His Excellency approves, perhaps you will request the Chief Resident Engineer to have the work put in hand, and I will give him every assistance I can.

I am, &c.,

G. P. GREENE,
General Manager.

No. 7.

The Hon. the COLONIAL SECRETARY to the CHIEF RESIDENT ENGINEER, Northern and Uda Pussellawa Railways.

Colonial Secretary's Office,
Colombo, April 9, 1903.

Preliminary Survey for Tunnels on Kadugannawa Incline.

SIR,—IN forwarding to you the enclosed copy of a letter received from the General Manager, Ceylon Government Railway, I am directed to inform you that His Excellency the Governor approves of Mr. Firbank undertaking the preliminary survey in connection with the proposed tunnelling operations on the Incline, and I am to request you, in communication with the General Manager, Ceylon Government Railway, to arrange for the work being put in hand.

I am, &c.,

A. R. SLATER,
for Colonial Secretary.

No. 8.

The Hon. the COLONIAL SECRETARY to the GENERAL MANAGER, Ceylon Government Railway.

Colonial Secretary's Office,
Colombo, April 9, 1903.

Preliminary Survey for Tunnels on Kadugannawa Incline.

SIR,—REFFERING to your letter No. 352 of 2nd April, 1903, I am directed to inform you that His Excellency the Governor has been pleased to approve your recommendation that Mr. Firbank be entrusted with the preliminary survey in connection with the proposed tunnelling operations on the Kadugannawa Incline. The Chief Resident Engineer has been requested, in communication with you, to arrange for the work being put in hand.

2. I am to state that His Excellency understands that nothing can be done until the survey is completed, and I am to inquire whether this presumption is correct.

3. I am to request you to submit a statement of the precautions which you have taken to ascertain any movement or subsidence in the Incline.

4. I am further to request you to report monthly as to the condition of the Incline, and to make an immediate report of any movement or change which may be noticed.

I am, &c.,

A. R. SLATER,
for Colonial Secretary.

No. 9.

The CROWN AGENTS FOR THE COLONIES to the Hon. the COLONIAL SECRETARY.

No. 103 E / 280/4

Downing street, London,
April 3, 1903.

Ceylon Government Railway, Kadugannawa Incline.

SIR,—I HAVE the honour to acknowledge the receipt of your letter of the 26th February, No. 122, forwarding a report by the Chief Resident Engineer of the Northern and Uda Pussellawa Railways upon certain defects in the Kadugannawa Incline of the Colombo-Kandy Main Line.

2. We have since received your telegram as follows, dated 20th March :—

Refering to my letter of 26th February, 122, if Consulting Engineers consider desirable to have opinion of another expert, Governor hopes that they will send out one at once.

And we received on the 21st March a cypher telegram from the Governor.

3. I have also to acknowledge the receipt of your letters of the 2nd and 3rd March, Nos. 128 and 129, dealing with the same subject.

4. We referred the papers to the Consulting Engineers, and on the 24th March we telegraphed to you, through the Colonial Office, as follows:—

> Consulting Engineers consider Oliver's opinion, from his knowledge of country and experience, superior to any engineer we could send out, except possibly Waring. They know of no specialists in rock decay. They have studied Oliver's reports to them and consider his conclusions generally sound, and think the expense of sending any one out unnecessary.

5. I now enclose for the information of the Governor, Messrs. Gregory, Eyles, & Waring's full report upon the subject. It will be seen from the last paragraph that the Consulting Engineers consider that if a second opinion is considered indispensable, Mr. Waring would be prepared to proceed to Ceylon at once.

I have, &c.,
M. A. CAMERON.

Enclosure in No. 9.

Messrs. GREGORY, EYLES, & WARING to the CROWN AGENTS FOR THE COLONIES.

March 27, 1903.

Ceylon Government Railway, Kadugannawa Incline.

GENTLEMEN,—WE have the honour to acknowledge the receipt of your letter marked E 280/1 of the 18th instant, with which was enclosed a copy of the Hon. the Colonial Secretary's letter No. 122 of the 26th ultimo, to your address, giving cover to a preliminary report No. 75, dated Kandy, the 5th ultimo, by Mr. Oliver, the Chief Resident Engineer of the Northern and Uda Pussellawa Railways, upon his examination of the Kadugannawa Incline on the Colombo to Kandy section of the Ceylon Government Railway. We are also in receipt of your memorandum E 280/4 of the 20th instant, with which you sent us a copy of a telegram from the Ceylon Government reading as follows, viz.: "Referring to my letter of 26th February, 122, if Consulting Engineers consider desirable to have opinion of another expert, Governor hopes that they will send out one at once," as well as of your memorandum, bearing the same mark and dated the 23rd instant, with which you sent us a tracing showing the plan of the Incline to which reference is made in the Colonial Secretary's letter No. 122 of the 22nd ultimo, and a letter No. 124 of the 5th ultimo from the General Manager of the Railway to the Hon. the Colonial Secretary, Ceylon. We have also received from you a decoded copy of the telegram despatched to you by His Excellency the Governor of the Colony on the 21st instant, and have had the additional advantage of studying a tracing of the centre line and sketches at some of the worst places which Mr. Oliver has sent to us unofficially.

2. We have given very careful consideration to the matters referred to in these documents, and with our letter of the 24th instant we sent you a draft telegram which we suggested might be sent to the Colony. We now in accordance with your request beg to submit the following detailed report upon the whole question.

3. In the third paragraph of Mr. Oliver's report he states that at many places on the Incline there are overhanging rocks which appear as if they might come down at any time; some of these are badly cracked and fissured and have but little support, and he describes the huge boulder known as the Lion's Mouth at 63 miles 38 chains, part of which was blasted away to let the railway go through it, as being, in his opinion, the worst of them, as both in the side of this boulder and in the roof and wall of the gallery through it there are cracks reported to be new and having that appearance. We consider that Mr. Oliver's recommendation, in which we note the General Manager and the Engineer of Ways and Works concurred, that the part of this boulder above the line should be blasted away as soon as possible was a sound one, and it is very satisfactory to us to learn from the telegram from His Excellency the Governor that this has been successfully done. The cure here should be a radical one, and though doubtless during the operation interruption to the through traffic and consequently much inconvenience to the public were entailed, though we hope not for the longer period anticipated by the General Manager, yet these are relatively insignificant compared with the avoidance of a possible most serious accident which might otherwise have resulted.

4. At the Meeangalla Gallery at 58¾ miles, where it is reported that the rock is decaying and scaling away both above and below formation level, and where pieces of rock occasionally fall from the roof on to the railway, and where also at the lower end of the gallery there is a long horizontal crack through which water finds its way; and at 63 miles 44 chains, where the boulders, on which the lower abutment of the three-arched viaduct, and the abutments of the 22 feet girder span rest, are stated to be decaying, cracking, and scaling, and to have a cavity below them, it is evident a serious state of affairs exists. We concur with Mr. Oliver that as a temporary measure at both these places all cracks, crevices, and cavities in or beneath the rock and boulders should be cleaned out, and all cracks and crevices carefully filled with good cement mortar, the cavities or spaces beneath the boulders being filled with good cement concrete, the external faces both of the mortar and concrete being rendered in cement, and examined daily to ascertain whether any further movement takes place. These operations and examinations should be entrusted, as suggested by the General Manager of the Railway, to an active and skilful European, who might, having reference to the possibility of further contingencies, be a foreman tunnel miner having had special experience of tunnelling in rock; he should have a suitable gang of coolies under his control, and it should be his duty to report at very frequent intervals to the Engineer of Ways and Works, who would naturally himself pay special personal attention to this part of the line, and who should communicate at once with Mr. Oliver in the event of any further developments occurring.

5. In the sixth paragraph of his report Mr. Oliver states the boulders at 63 miles 44 chains might be blasted away, as well as a considerable quantity of rock at the side of the line, the railway being afterwards carried over the place by girders or built up retaining walls. This should be a permanent cure, but as it would be costly and take several months to carry out, during which the line would be blocked, we cannot recommend its adoption.

6. It appears to us, however, especially if after careful examination for a short time, any, even the slightest movement were detected, that the best and safest as well as a permanent remedy will be

found at these two places by the construction of the tunnels recommended by Mr. Oliver in the 4th and 10th paragraphs of his letter; these tunnels would, it is stated, be respectively about 400 yards and 250 yards in length. Great care in determining the exact course of the shorter tunnel should be exercised with the view of placing it well inside of the vertical crack or crevice shown on cross section S.S. on the tracing dated the 2nd instant, which Mr. Oliver has sent us, even if this should entail some increase in length of the tunnel; this crack, as it is shown to be some 70 ft. in depth, seems to be a serious one. We regret that we have no information, as it does not appear on the adjacent cross sections B.B., C.C., and D.D., to enable us to determine its length on plan; apart altogether from this tunnel, we are of opinion as a precaution, and to avoid as much as possible shaking the rock at these places, that at the worst spots the tunnels be kept as far into the hillside as possible, that all blasting be prohibited during the passing of trains, and a most careful examination be made of all cracks, &c., after each blast.

7. We are disposed to think Mr. Oliver's rough estimate of Rs. 300,000 as the cost of these two tunnels and of clearing away the other threatening rocks is rather low; under ordinary circumstances it might perhaps suffice, but in view of the special conditions of the case no close estimate can be at present framed, and the Colony must be prepared to face an expenditure higher than that named. The time necessary for the completion of the tunnels is dependent upon the speed with which the headings can be driven, and this, if ordinary machine drills actuated by compressed air such as were used in constructing the rock tunnels on the Nanu-oya and Haputale Railways be employed, should we consider be about 30 to 40 feet per mensem at each face if hard gneiss rock be traversed, as we think probable. If by driving side adits at either or both tunnels, should such be found absolutely necessary, the number of faces at which the rock can be attacked be increased, a material saving of time would be gained, and of course by the use of more powerful machinery, such as is now used in the Simplon Tunnel, a similar result would follow, but we fear the cost of this machinery would render its use prohibitive for such short tunnels as those now under consideration.

8. We have dealt at some length with Mr. Oliver's recommendations regarding the measures to be adopted at the Lion's Mouth, at the Meeangalla Gallery, and at 63 miles 44 chains, as their importance seems to demand this; but from his letter it will be noted that there are other points on the Incline where the state of the line requires attention, and it will perhaps be now sufficient for us to state that we consider his proposals with respect to them, including the construction and keeping open of paths for inspection purposes, with which the General Manager of Railway and the Engineer of Ways and Works concur, appear to be sound, and in our opinion should be carried out forthwith.

9. In regard generally to the decay and scaling of the rock and to the appearance of cracks in the Meeangalla Gallery, the Lion's Mouth, and possibly other places where the rock overhangs the line, forming what perhaps may be described as a semi-tunnel, it must be remembered during the thirty-six years that have elapsed since the construction of the railway the rock has been fully exposed to the weather, at one time baked in a tropical sun, possibly also excessively heated in places by jungle fires, and then suddenly cooled by drenching rains. These conditions would naturally render it, notwithstanding its hardness, specially liable to decay and scaling, which is accelerated by the growth of vegetation in cavities or between the scales, while the appearance of cracks would probably be due to the "fatigue" which all materials experience when exposed to repeated or long-continued stress, although such stress may be much below that which would, if applied once only, or at rare intervals, fracture them.

10. We agree with the General Manager of the Railway and with Mr. Oliver that the remedy for the present state of affairs lies in putting the Kadugannawa Incline into thoroughly good order rather than in the construction of an alternative route, which would be attended with heavy first cost as well as expense in maintenance, bring little if any fresh or additional traffic on to the railway, and which, besides, would be probably just as liable to interruption from slips occurring at the same seasons of the year as the Kadugannawa Incline is, and it is satisfactory to us to learn that both these officers adopt the views we expressed on this matter in our report to you of the 18th October, 1901.

11. We gave very careful consideration to His Excellency the Governor's proposals that another engineer should be sent out at once in order to report on this matter, but we came to the conclusion that Mr. Oliver's experience in rock of the class met with on the Incline would render his opinion of more value than that of any engineer we could send out, whose experience of this nature had been gained in other countries, and in view of the high opinion we have of Mr. Oliver's engineering capabilities, and our knowledge of the care he brings to bear on his work, we should ourselves place full reliance on the conclusions he has arrived at. If, however, a second opinion is considered indispensable, Mr. F. J. Waring of our firm is the only engineer with the requisite experience, whose opinion would have perhaps greater weight than that of Mr. Oliver, and he would be prepared to proceed at once to Ceylon should the Government consider the expense of such a visit to be warranted in view of the fact that Mr. Oliver's opinion is endorsed by that of the Engineer of Ways and Works on the spot, and so far as can be judged from the documents sent to this country by ourselves here.

We have, &c.,
GREGORY, EYLES, & WARING,
Consulting Engineers.

No. 10.

The Hon. the COLONIAL SECRETARY to the CROWN AGENTS FOR THE COLONIES.

No. 256. Colonial Secretary's Office,
Colombo, April 27, 1903.

GENTLEMEN,—I AM directed by His Excellency the Governor to acknowledge receipt of your letter No. $\frac{103\,E}{208/4}$ of the 3rd instant, confirming your telegram of the 24th March, in which you stated that the Railway Consulting Engineers considered it unnecessary to send out an expert to report on the condition of the Kadugannawa Incline as specially requested by His Excellency. I am also to acknowledge the copy of the Consulting Engineer's report dated the 27th March which accompanied your letter.

2. In reply, I am directed to convey to you an expression of His Excellency's regret that the Consulting Engineers were unable to comply with the urgent request of this Government which was made at the request of Mr. Oliver, Chief Resident Engineer, Northern and Uda Pussellawa Railways. This Government did not, as the Consulting Engineers appear to suppose, doubt the accuracy of Mr. Oliver's conclusions, but the question was raised by Mr. Oliver as to whether, pending the construction of the tunnels recommended in the 4th and 10th paragraphs of his report, traffic should cease. Mr. Oliver was reluctant to express an opinion on the subject, and spontaneously and urgently asked for the co-operation of an expert. It was therefore with some surprise that His Excellency received your telegram of the 24th March stating that the Consulting Engineers consider Mr. Oliver's opinion to be superior to any engineer they could send, except Mr. Waring, and that they knew of no specialists in rock decay, and that further they considered the expense of sending any one out to be unnecessary.

3. His Excellency considers it his duty to state that he does not consider the attitude of the Consulting Engineers in this matter to have shown a proper appreciation of the situation. In a matter of such importance the Colony naturally looks to the Consulting Engineers for assistance. Fortunately, a reference to the Government of India has been more successful, and they have placed at the disposal of this Government an expert in rock decay, namely, Mr. Middlemiss, Senior Superintendent of their Geological Survey. His Excellency has accordingly appointed a Committee composed of Mr. Oliver, Mr. Greene, the General Manager of the Railway, Mr. Middlemiss, and Mr. Dixon, Mining Engineer, now on special duty on gold exploration in the Colony. They will be assisted by Mr. Paton Gray, and will report on the condition of the rock at the Meeangalla Gallery and other places, and as to the possibility—regarding which there appears to be some doubt—of the proposed tunnelling, and they will also give an opinion of the safety of continuing the traffic along the condemned portion of the line pending the construction of the new works. Their report will be submitted to the Secretary of State. Under these circumstances I am to state that this Government does not consider the deputation of Mr. Waring to be necessary.

I have, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 11.

The Hon. the COLONIAL SECRETARY to Messrs. H. OLIVER, G. P. GREENE, C. S. MIDDLEMISS, and G. G. DIXON.

Colonial Secretary's Office,
Colombo, April 27, 1903.

GENTLEMEN,—I AM directed to inform you that His Excellency the Governor has been pleased to appoint you to be a Committee to report on the condition of the rocks at the Meeangalla Gallery and other places on the Kadugannawa Incline, and as to the possibility—regarding which there appears to be some doubt—of the tunnelling proposed by Mr. Oliver.

2. His Excellency further desires to be furnished with your opinion as to the safety of continuing the traffic along the condemned portion of the line pending the construction of the new works.

3. The General Manager, Ceylon Government Railway, has been requested to instruct Mr. A. Paton Gray, Engineer, Ways and Works, to assist you, and to afford you all information necessary on the subject.

I am, &c.,
A. R. SLATER,
for Colonial Secretary.

No. 12.

The Hon. the COLONIAL SECRETARY to the GENERAL MANAGER, Ceylon Government Railway.

Colonial Secretary's Office,
No. 321. Colombo, April 27, 1903.

Blasting Operations, Kadugannawa Incline.

SIR,—I AM directed by His Excellency the Governor to forward to you the enclosed copy of an extract from a report of the Consulting Engineers* on the above subject, received from the Crown Agents for the Colonies.

I am, &c.,
A. R. SLATER,
for Colonial Secretary.

No. 13.

The Hon. the COLONIAL SECRETARY to the GENERAL MANAGER, Ceylon Government Railway.

Colonial Secretary's Office,
No. 322. Colombo, April 27, 1903.

Kadugannawa Incline, Blasting Operations on.

SIR,—IN forwarding for your information the enclosed copy of a letter appointing a Committee consisting of Messrs. H. Oliver, Middlemiss (Senior Superintendent, Geological Survey of India, whose services have been lent to this Government for a short period), G. G. Dixon, and yourself, I am directed to request you to instruct Mr. A. Paton Gray to assist the Committee, and to afford them all the information necessary on the subject.

2. Mr. Middlemiss arrived in Ceylon on the 25th instant, and it is desirable that the Committee should meet at Kandy at the earliest possible time.

I am, &c.,
A. R. SLATER,
for Colonial Secretary.

---

* See No. 9, *ante*.

No. 14.

The GENERAL MANAGER, Ceylon Government Railway, to the Hon. the COLONIAL SECRETARY.

No. 417. General Manager's Office, Colombo, April 21, 1903.

Preliminary Survey for Tunnels on Kadugannawa Incline.

SIR,—IN reply to your letter No. 275 of the 9th instant, I have the honour to note paragraph 1 of your letter, and will take the necessary steps to assist the Chief Resident Engineer in completing the survey.

Re paragraph 2, it will be possible to make the necessary preliminary inquiries from the Consulting Engineers as to the supervising staff and appliances required, and the Chief Resident Engineer will arrange this.

The question as to whether the work, if undertaken, shall be carried out by the open line or Construction Department has not yet been decided, but I understand the Chief Resident Engineer is willing to undertake it, and I consider this the proper course. His Excellency the Governor's ruling on this matter is desirable.

Re paragraphs 3 and 4, I enclose a copy of the report of the Engineer of Ways and Works.

I am, &c.,
G. P. GREENE,
General Manager.

Enclosure in No. 14.

The ENGINEER, Ways and Works Department, to the GENERAL MANAGER, Ceylon Government Railway.

No. 256/212. Engineer, Ways and Works Office, Colombo, April 18, 1903.

Preliminary Survey for Tunnels on Kadugannawa Incline.

SIR,—WITH reference to paragraph 3 of the Hon. the Colonial Secretary's letter No. 275 to you of 9th instant, I have the honour to report that the cracks in the rocks, specially referred to by Mr. Oliver in his report No. 75 of 5th February, 1903, and also any others I considered likely to prove dangerous, have been carefully cemented, and special patrols have been put on at the points where these rocks are situated.

2. The foreman recently appointed in connection with the inspection, &c., of the rocks on the Incline has also received instructions to examine periodically the cement "tell-tales" on these cracks, and report at once the slightest movement.

3. As regards paragraph 4, monthly reports will be submitted as requested.

I am, &c.,
A. PATON GRAY,
Engineer of Ways and Works.

No. 15.

The Hon. the COLONIAL SECRETARY to the GENERAL MANAGER, Ceylon Government Railway.

No. 354. Colonial Secretary's Office, Colombo, May 6, 1903.

Preliminary Survey for Tunnels on Kadugannawa Incline.

SIR,—IN acknowledging the receipt of your letter No. 417 of 21st April, I am directed to state with reference to paragraph 2 thereof that His Excellency the Governor desires that any correspondence with the Consulting Engineers should pass through this office.

2. I am to state that matters are not yet ripe for a decision to be arrived at as to whether the work, if undertaken, shall be carried out by the open line or Construction Department.

I am, &c.,
A. R. SLATER,
for Colonial Secretary.

No. 16.

The GENERAL MANAGER, Ceylon Government Railway, to the Hon. the COLONIAL SECRETARY.

No. 512. General Manager's Office, Colombo, May 12, 1903.

Kadugannawa Incline.

SIR,—With reference to your letter No. 322 of the 27th April, I have the honour to forward herewith the joint report of the Committee referred to, and also Messrs. Middlemiss and Dixon's reports.

2. With a view to saving time in submitting the reports the documents are forwarded without having been copied, and I would request therefore that copies of the same be prepared and forwarded to the four members of the Committee as soon as possible.

I am, &c.,
G. P. GREENE,
General Manager.

Enclosure in No. 16.

Messrs. C. S. MIDDLEMISS, GEORGE G. DIXON, G. P. GREENE, and H. OLIVER to the Hon. the COLONIAL SECRETARY.

Kandy, May 11, 1903.

SIR,—WE have the honour to report that, in accordance with the request contained in your letter of the 27th April, we have carefully examined the Kadugannawa Incline with a view to arriving at a decision on the questions raised by His Excellency the Governor.

2. We forward herewith the special reports of Messrs. Middlemiss and Dixon.

3. There are several places where special measures are necessary to provide for the safety of the line. Of these, the two most important are "The Arches" at 63 miles 44 chains and the Meeangalla Gallery at 58 miles 60 chains.

4. At these places we are agreed that tunnels are necessary, and that, if the spots are systematically and intelligently watched, the traffic need not be stopped during the time the tunnels are being made. We consider that there will be no serious obstacle to the building of these tunnels.

5. The tunnel at 63 miles 44 chains will be approximately 230 yards long, and by its construction all the dangerous portions at this place will be avoided.

6. The tunnel at 58 miles 60 chains will be approximately 420 yards long, and will completely avoid the overhanging gallery.

7. With regard to the other unsatisfactory places mentioned in the reports of Messrs. Middlemiss and Dixon, we are all agreed as to the proposals and conclusions contained in those reports.

8. As to the removal of trees and vegetation, we consider that wherever their growth threatens to disturb the stability of the rocks, or where they are in dangerous proximity to the line, they should be taken away, but that in other places the vegetation should be left undisturbed as far as possible, so as to avoid laying bare the surface soil.

We are, &c.,

C. S. MIDDLEMISS.
GEORGE G. DIXON.
G. P. GREENE.
H. OLIVER.

Sub-Enclosure No. 1 in Enclosure in No. 16.

REPORT ON THE GEOLOGICAL CONDITIONS AFFECTING THE KADUGANNAWA INCLINE.

(With reference to Proposals for Tunnelling to avoid the Dangerous Localities.)

By C. S. MIDDLEMISS.

Nature of the Rock.—The dominant rock of the Incline is a biotite gneiss, banded in distinct layers containing more and less of the ferro-magnesian mineral; and with paler pinkish granitic veins here and there, especially noticeable at the old (1897) slip west of the Meeangalla Gallery.

As such, and as a whole, it constitutes an excellent foundation for a hill railroad.

Divisional Planes, Direction, &c.—In like manner, all the steeper cuttings and sections on the Incline which I have seen show that the main divisional planes in the rock—namely, the foliation planes, or direction of mineral banding, and ease of splitting—lie in the safest possible way, namely, with their dip or inclination towards the hill. That direction is N.E. or N.E. by E., with a strike N.W.-S.E. of N.W. by N.-S.E. by S. The course of the railway along this Incline, from the 54th to the 64th mile, is also roughly N.W.-S.E., and it keeps therefore along one and the same formation.

The Line generally very stable.—It would thus seem that the general permanence and stability of the Kadugannawa Incline are assured. Its natural foundations and the way they are laid could hardly be better.

How the Dangerous Localities have come about.—The bad places on the Incline are primarily due to a second and third set of divisional planes (joints) which cut the rock in two directions, roughly at right angles to each other and to the foliation planes. Such joints are irregular in their distribution, and only become of importance when differential movement of the rocks along them has been established. In gneissic and plutonic rocks these planes are not necessarily mathematical planes: they are frequently curved or distorted, so that the surfaces appear wavy, warped, or undulating. When one or other of these sets of joint planes lies approximately parallel to the hill-slope, and nearly coincides with it; or when the two meet equally inclined to the free surface of the slope, if that slope makes as much as an angle of 40° or more with the horizontal, it will periodically shed layers of rock down the slope. Innumerable examples of this may be seen on the slopes of the highest hills in the vicinity of the Kadugannawa Pass. They may not have happened within the memory of the oldest inhabitant, but to the geologist the tale they tell is quite clear. In colder climates the action of frost (by expanding the water within the fissures) greatly facilitates this form of block shedding or "calving" of the mountain slopes. In a climate such as Kandy enjoys no such facility is afforded, and the action is slower and almost unperceived, being entirely carried on by weathering and the solvent action of running water. Nevertheless it still goes on, and what are almost invisible joints in the heart of the rock become, near the surface, clean-cut cracks, and then widened fissures as more and more movement and solution along the joints develop. When there are a series of these joints one behind the other the more outer are generally more developed and show evidence of more movement, producing an appearance of step-faults (as known in geology).

"The Culverts," 63 Miles 44 Chains from Colombo.—Such is the position at "The Culverts," 63 miles 44 chains from Colombo. If the section of the hill-slope at this point be examined* (Fig. 1) there are three or more of such parallel fissures or step-faults shown developed from one set of joints with

* As no cross sections drawn to scale were available, I have supplemented this report by *camera lucida* sketches of the chief places on the Incline.

blocks of strata between. It does not appear from the evidence available that any movement of importance has gone on along these fracture planes since the line was opened. But I think it is evident that widening of the fissures and consequent loosening of the strata blocks has taken place. It should be observed that, although the direction of these fissures (being about N.W. by N.) takes them well into the hill in a N.W. direction, in two cases at least joint planes at right angles to these have developed into widened fissures, which meeting the first set completely isolate each block of strata from the parent rock behind (just after the manner that two cuts into a cake detach a segment). These two cases form the dangerous localities at "The Culverts," and are one on each side of the masonry arches.

Such a condition might remain stable for ten, twenty, or even fifty years longer; but the *risk* of a fall by sudden collapse of one of the blocks is in my opinion distinct and real, because of the high angles of the fissures, which are much higher than the angle of repose for such rocks, which may be taken at about 40° with the horizontal. Doubtless some inequality, or some projecting parts of the outward blocks with regard to the next behind them, for the present interlock the one set with the other. The exact manner of it cannot be seen of course. But, whatever it is, we have no right, I think, to presume on its continuing indefinitely; and when it gives way the outer blocks of strata will slide. This would not only seriously damage the line for some time, but it would leave a steeper general slope behind for the line to be carried over or round, with a certainty of repetition of the process of "calving" of the next fissured block behind at some future time.

Remedial Measures proposed.—The remedy for such a state of things is theoretically two-fold (or even three-fold). It might be decided to build up masonry all round and under the two threatening blocks of strata and so support them. The alternative is to tunnel. Although the former is not impossible, it would be an enormous undertaking to be of any permanent help in supporting the blocks. And even then the support would only be derived from the next fractured block behind and beneath, which in itself must be considered unstable. To tunnel, therefore, seems to be the only reliable remedy. I think, however, that the tunnel, which must run diagonally across the second and third blocks of faulted strata, should not pass near to the present hill-slope. Tunnelling there might be difficult, and water troubles make lining of the roof and sides imperative. I would advocate the tunnel taking a good curve into the hill, so as to get well clear behind the fissures in the line of the section shown (Fig. 1). There is a third conceivable course of action, namely, that of blasting away the whole slope until it attains the angle of repose (about 40°); but this would be too gigantic an operation for practical ends.

Provisional Action until the Tunnelling is done.—As a temporary measure until the tunnelling is completed, I am of opinion that close scrutiny of the fissures at these points will be sufficient. Filled in as they now are in the case of the west block with cement and concrete, any premonitory symptoms of collapse would be at once detected. Should symptoms appear during the coming monsoon (as they very well may), they must be carefully watched more or less frequently according to their progress. I think it would be time enough to stop the passage of through traffic at this point if, symptoms of subsidence having set in, it is demonstrated by systematic watching that those symptoms are getting worse and not ameliorating. It is likely, however, that the bedding in of the foot of the block in concrete and the lining of the channels with cement, as has been done in the case of Block I. (see Fig. 2) to the west, will effectually prevent further scouring by rain of the sides and foot of the block, and so render it safe for some time to come. As a permanent remedy it is, of course, too slight; and would be quite ineffectual if the block were started downward by an unforeseen event, such as an earthquake shock. Parenthetically I may remark that I think masonry built up under the foot instead of concrete would have been better, as its crushing strain is far higher than that of Portland cement.

I would recommend a similar lining of the E.N.E. fissure of Block II. to the east of the arches (see Fig. 3).

The Meeangalla Gallery.—The position at the Meeangalla Gallery is generally similar to that at "The Culverts." It differs, however, in certain particulars. From one point of view it is the more dangerous, inasmuch as the angle of the free surface is much steeper and even slightly overhanging immediately above the line. On the other hand, the conversion of the cracks into open fissures has not proceeded so far. They have not become so much widened by differential movement, weathering, and scouring by water, but then again, on account of their greater steepness, it is a question whether they would stand so much loosening without giving way altogether.

Figs. 4 and 5 will give a general idea of the aspect of the cracks at this point and of the great mass of rock which threatens dismemberment. In this case of the gallery the cracks are far more irregular in direction (due doubtless to the many interruptions by granitic veins at this point) than at "The Culverts." They indicate a plane or planes of separation of an irregular, wavy, and distorted kind, the nature of which may be well ganged by exactly similar separation planes immediately to the west when the slip of 1897 came down.

S.S.W. N.N.E.

FIG. I.—SECTION AT "THE CULVERTS."

63 M. 44 CH.

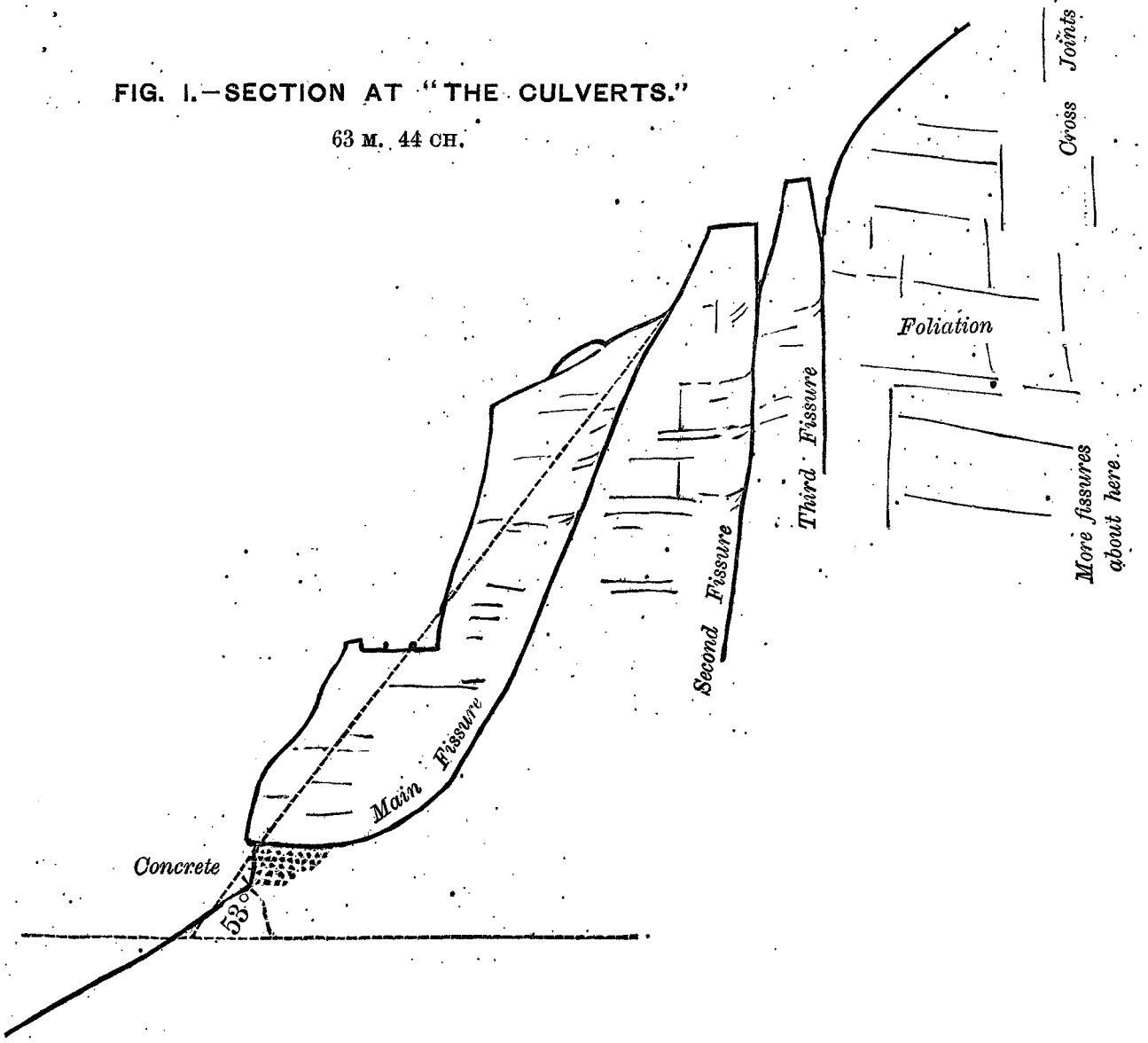


FIG. 2.—"THE CULVERTS."

63 M. 44 CH. — BLOCK I.

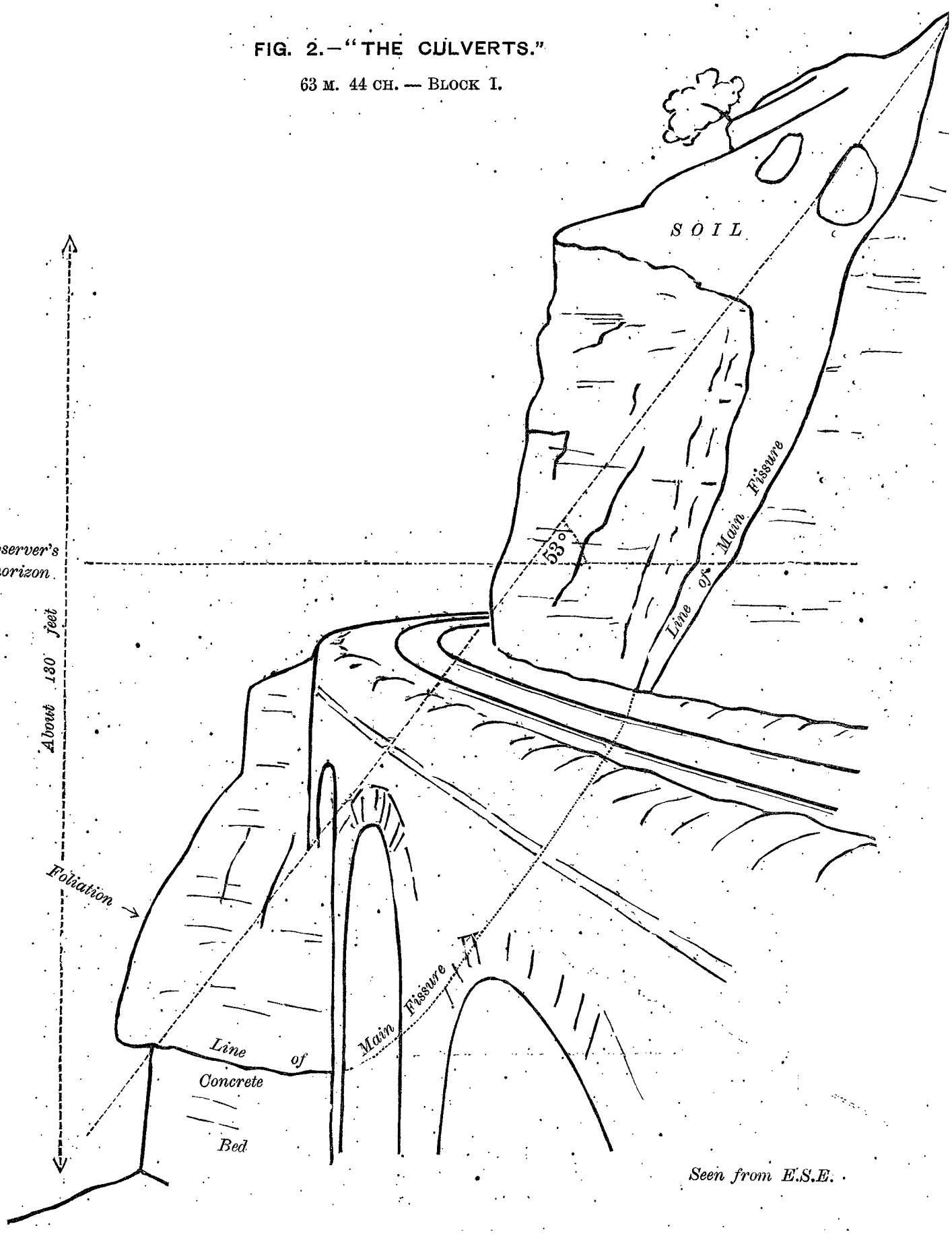


FIG. 3.—"THE CULVERTS."

63 M. 44 CH. — BLOCK II.

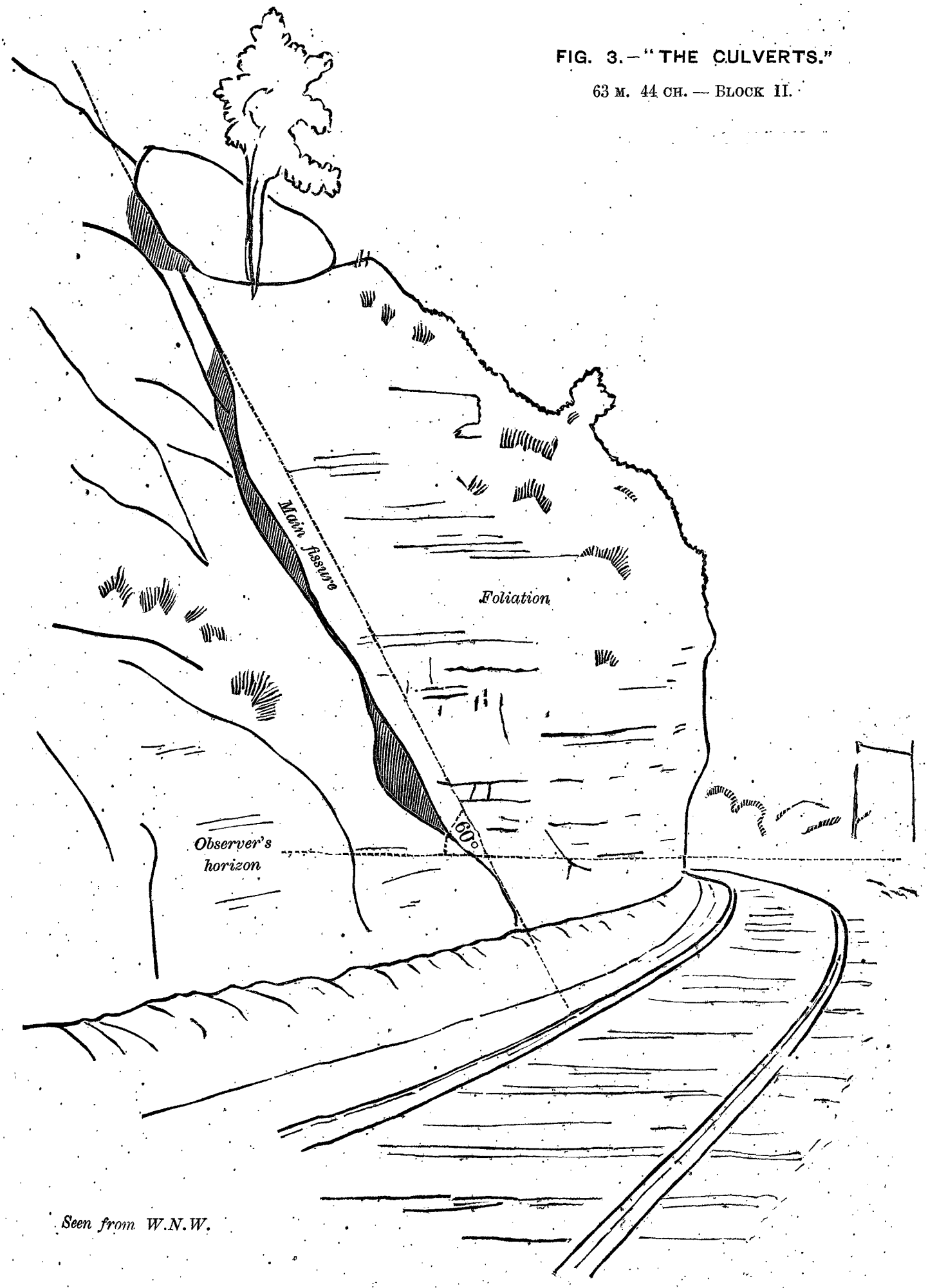
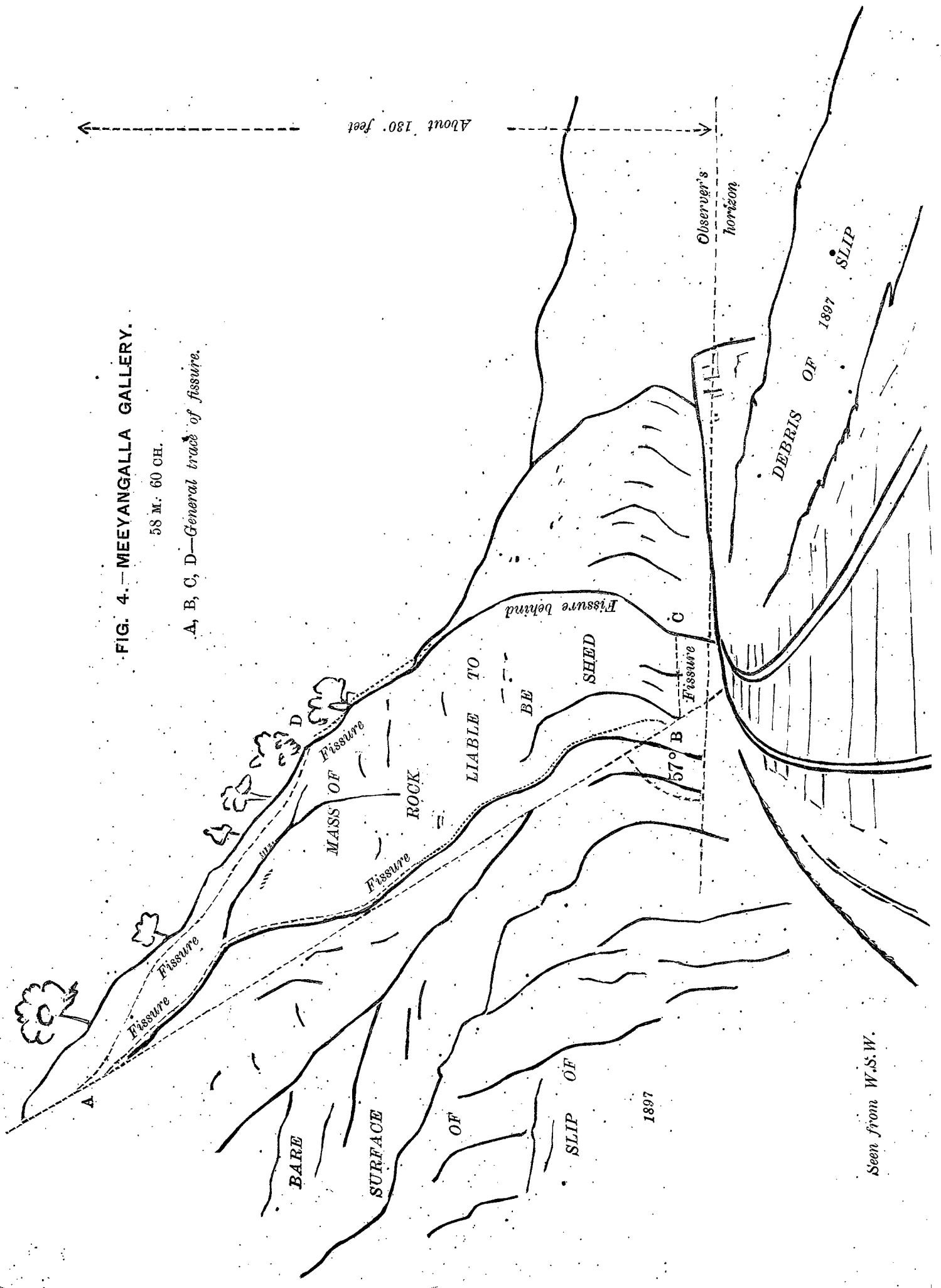


FIG. 4.—MEEYANGALLA GALLERY.

58 M: 60 CH.

A, B, C, D—*General trace of fissure.*



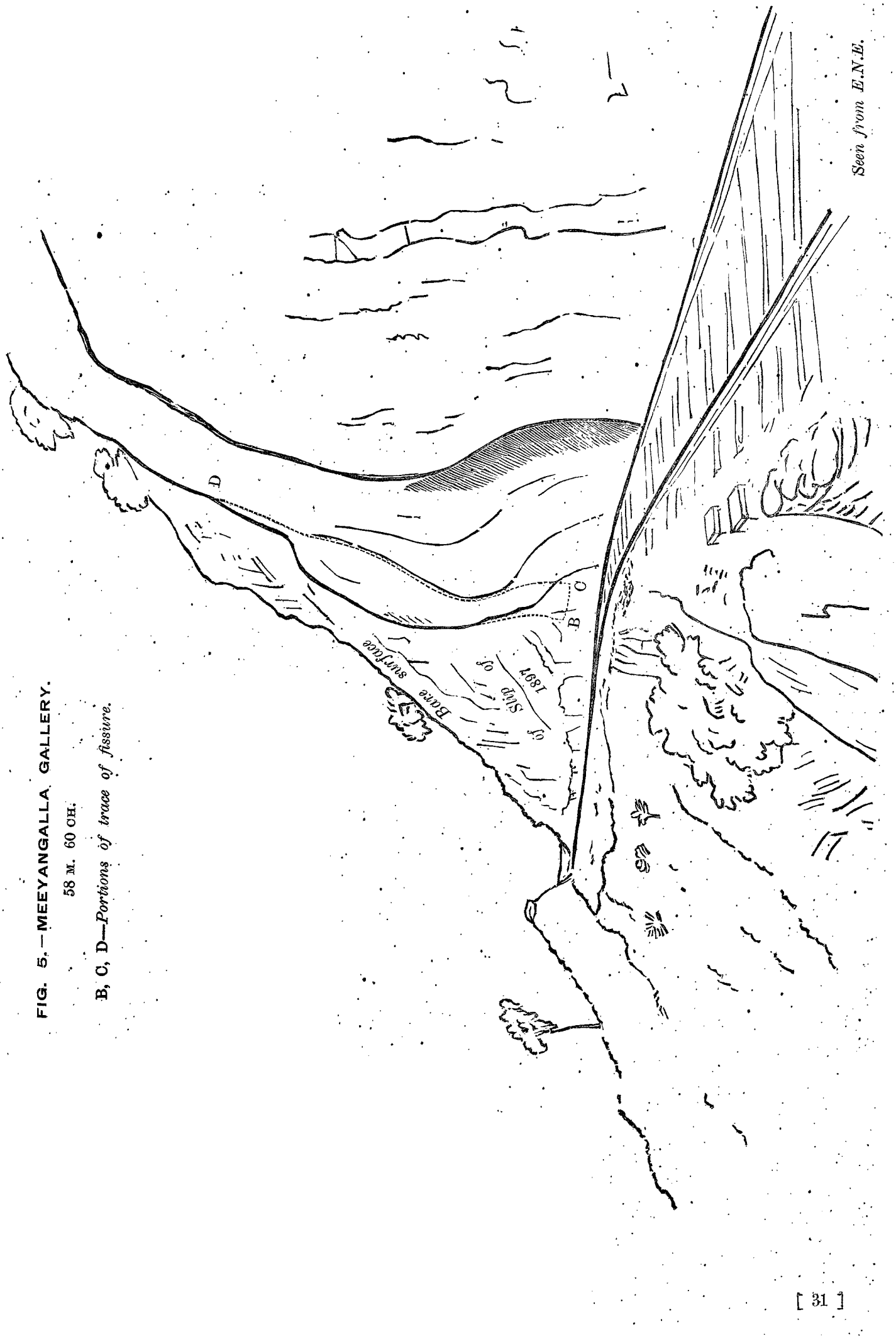


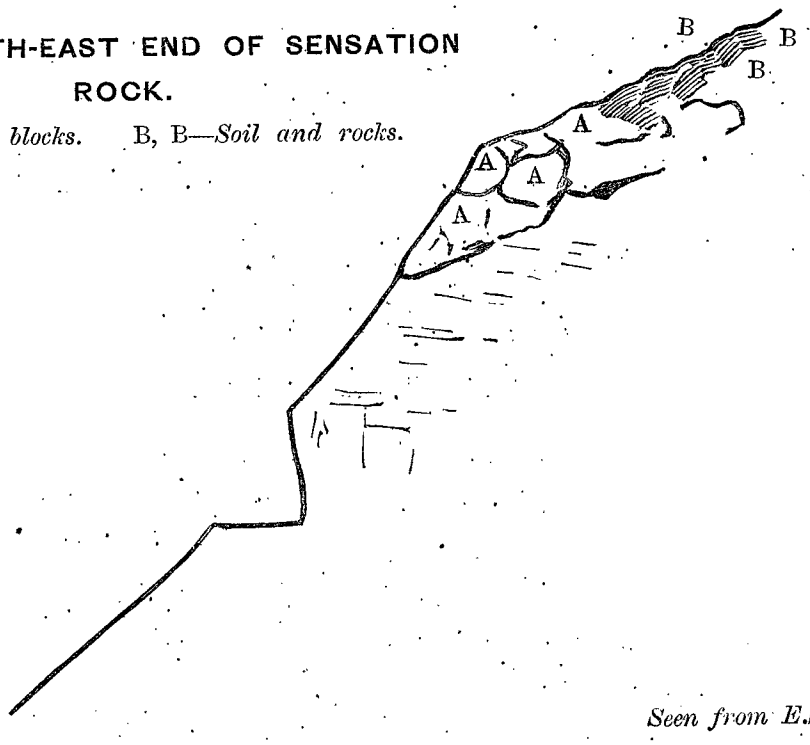
FIG. 5.—MEEYANGALLA GALLERY.

58 M. 60 CH.

B, C, D—*Portions of trace of fissure.*

FIG. 6.—SOUTH-EAST END OF SENSATION ROCK.

A, A—*Loose blocks.* B, B—*Soil and rocks.*

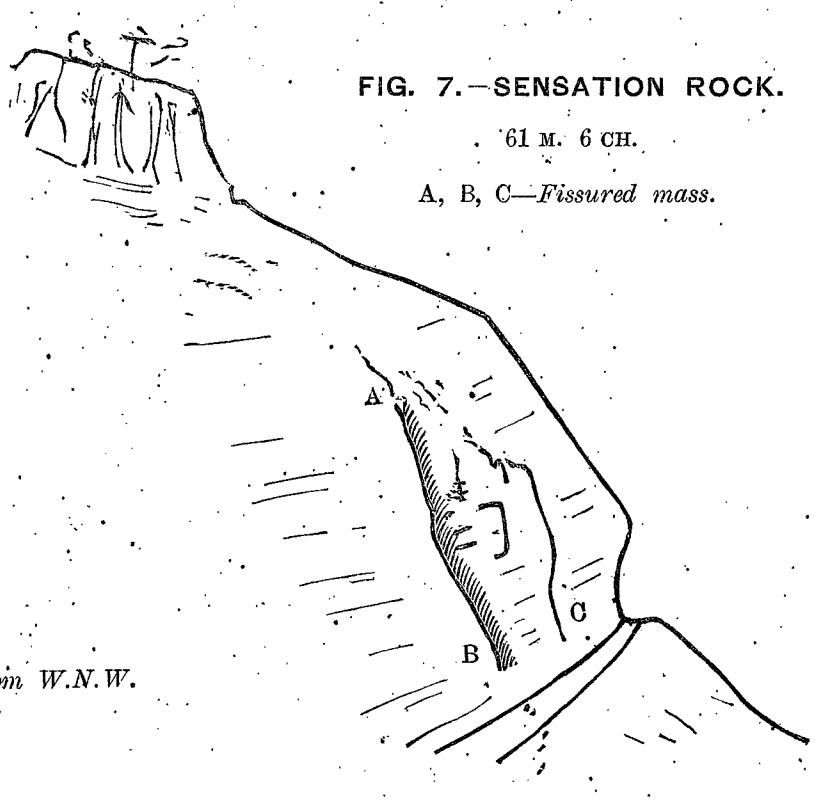


Seen from E.S.E.

FIG. 7.—SENSATION ROCK.

61 M. 6 CH.

A, B, C—*Fissured mass.*



Seen from W.N.W.

Tunnelling the only Remedy.—It is possible that if the only danger at this point were from this particular mass of rock a remedy might be found by blasting the whole of it away and reducing the slope more nearly to one of stability, but I am of opinion that the whole of the overhanging slopes above the "gallery," which split up naturally into two great steeply convex masses separated by a water-course, and which protrude from the normal slope of the hill like two breasts, must be considered as ultimately dangerous and likely to give trouble from time to time. If their position be viewed from Sensation Rock, it will be seen at once that those two protruding and overhanging masses are the exact counterpart of what must have existed immediately to the west before the 1897 slip took place. In this case also, then, I think tunnelling the only safe remedy, and it should of course clear the whole of the "gallery" from end to end.

Provisional Measures.—As a provisional course of action until this is completed the cracks must be carefully watched for any premonitory symptoms of movement, as in the case of "The Culverts." Until such appear I think it unnecessary to close the line to through traffic.

Other Bad Places on the Incline.—In addition to "The Culverts" and the Meeangalla Gallery there are some other localities on the Incline which call for treatment, but none in my opinion which need so drastic a measure as tunnelling. The majority of these present either no very great mass of dangerous rock, or are situated on slopes whose general angle is low. No special measures are required in their case, and I do not think I need burden this report with a number of trivialities of this kind.

Sensation Rock.—Sensation Rock seems to be the only one calling for any comment. This precipitous spur, as a whole, seems remarkably safe. It is almost entirely free from fissures and dangerous cross joints in spite of the steep slopes. There are one or two minor points that may be referred to here:—

(1) The loose blocks on the top of the culminating crag should be underpinned or blown away.
(2) The water channels in the soil-cap above the lower main crag might be lined and kept water-tight. At present they are in a bad state.
(3) The small mass A, B, C (Fig. 7) at 61 miles 6 chains should be blasted away to about 5 feet above the rail. (The slopes below the rail at this point are quite safe.)
(4) The fissured blocks with soil-cap and boulders on the top of the main crag at the S.E. end of Sensation Rock (see Fig. 6) should be got rid of by blasting and reduction of the slope.

General Question of Tunnelling.—It is hardly necessary for a geologist or any one to offer any remarks on the general question of tunnelling. There are sufficient examples and object lessons already on the line to show what is to be expected in the way of work to be done, cost, and time of work, &c. The relatively small amount of free surface in a tunnel and the natural strength of an arched roof in such rocks, even without lining, make it absolutely free from all the effects of the sub-ærial agencies we have been considering in connection with cuttings and hill-slopes. In dealing with bad slopes by cutting back, an engineer never knows when his work is finished, for every fresh slip entails a further cutting back and a longer slope. But a tunnel once made in rocks such as those on the Incline gives no further trouble, and must be considered as the proper normal remedy in all such cases.

Interfering with the Surface of Bad Slopes deprecated.—With reference to the clearing of the jungle on the cuttings, although I quite appreciate the fact that it is necessary to cut away thick scrub for the purpose of seeing any hidden danger or loose blocks, as well as for the purpose of making paths by which the places can be examined; still, I think that all unnecessary work of this kind, especially when the slope is a soil-cap slope, should be deprecated. Nothing protects a soil-cap so much as a good cover of vegetation. In the Himalayas a large number of landslips have been directly traced to interfering with the surface soil, and the consequent admittance of rain during heavy bursts directly on to and into the soil-cap.

Method of watching the Fissures.—As regards the watching of the fissures and cracks at the dangerous localities until the serious remedies are effected, the only practical way to insure its being done regularly and thoroughly is to issue printed forms for each locality and fissure, with blank spaces to be filled in by a responsible person every day as showing cracks or no cracks, movement or no movement. The cracks should all have a number assigned to them, and be shown on a plan so that the signed forms may be absolutely definite. Some officer should of course receive and file these forms, check the statements, and take action if necessary. During any exceptionally heavy monsoon weather the patrolling of the bad places should be redoubled.

May 10, 1903. C. S. MIDDLEMISS.

Sub-Enclosure No. 2 in Enclosure in No. 16.

GEORGE G. DIXON, Esq., to the Hon. the COLONIAL SECRETARY.

Kandy, May 11, 1903.

Kadugannawa Incline.

SIR,—I HAVE the honour to report that I have visited the Kadugannawa Incline eight times. The three questions put before me were as follows:—

(1) Are there any places on the Incline that, owing to their dangerous condition, require tunnels or other remedies of the sort?
(2) Are the remedies to be tunnels or not?
(3) Is each place fit for the continuance of traffic until the remedies are completed?

The answer to question (1) is that there are five places of some magnitude which require attention, and at several points on the Incline there are loose rocks on the hillside in dangerous positions.

The first place on the Kadugannawa end of the Incline is known as "The Arches," (63 miles 44 chains). At this point the rock both above and below the line is badly faulted; there are two dangerous places at this spot, one just before reaching the culvert and the other between the culvert and the iron bridge.

No. 1.

In the former the faults run into the hill at different angles, one being south-east the other south-west, and if these faults continue to sufficient depth horizontally they will meet at a point 88 feet from the centre of the railway line.

The base of the triangle would be 213 feet parallel with the line, the upper fault would be 80 feet long, and the lower fault 177 feet long; this would give an area at the level of the line of 8,307 square feet.

No. 2.

The faulted rock between the culvert and the iron bridge has a base line of 77 feet, the upper fault being 33 feet and the lower 47 feet; this gives an area of 1,309 square feet. The fault lines would meet 34 feet from the centre of the railway line.

Below the level of the line this rock is undercut by a horizontal fault, which continues back into the hill, at one place apparently beyond the centre of the railway line. This fault was filled with cement before my inspection, so that I can only judge by the angles of the opening as to its probable depth.

No. 3.

The Lion's Mouth.—A large portion of this rock has been removed, but the remainder should also be taken away as soon as possible.

On the upper side it is wholly unconnected with the hill; on the lower side it is evident that a vertical fault runs back into the hill and joins up with a crack which runs at the back of the block parallel with the railway line.

The face of the mountain on which this block rests has a slope 63 degrees to within 12 feet of its outer toe, when it alters to 33 degrees for 8 feet, and then has 4 feet which is approximately horizontal; but this base is undercut by a horizontal fault in the rock composed of micaceous matter which is weathering very rapidly.

No. 4.

Sensation Rock.—At this point there are several large and small rocks which need immediate attention, especially one almost overhanging the railway line, and a large mass of rock perched high up on the hill side.

No. 5.

Meeangalla Gallery.—There is a horizonal fault in the gallery 94 feet long parallel with the railway line.

Above this on the hill side, and approximating with either end of the fault, are two cracks running up the mountain side, but it is not certain that either crack actually joins the horizontal fault, but, being apparently the line of least resistance, should a movement take place they would probably join up.

The horizontal fault has, I understand, been cemented for the past five years, and there is no evidence of any movement having taken place during that period. Besides these five important points there are a number of loose rocks the removal of which is desirable.

The answer to question (2) is that in the case of Nos. 1, 2, and 3 the difficulty could be overcome by one tunnel, which should be commenced below the Lion's Mouth (unless it is cheaper to remove that rock) and come out near the stairway on the upper end.

The alternative is the entire removal of the Lion's Mouth, and of No. 2 to the level of the railway line; No. 1 would require careful watching and the removal of a portion of the rock.

To make the whole of the above portion absolutely safe the tunnel referred to is necessary; to make it reasonably safe the latter is sufficient.

No. 4.

The rocks referred to on this portion of the Incline can all be removed by blasting; no tunnel is required.

No. 5.

To make this portion of the Incline absolutely safe a tunnel will be necessary. The hill side at this point is so steep that very little warning would be given should a movement take place, before the whole mass would be on the railway line; on the other hand, there might be no movement for years.

In answer to question (3). This is a most difficult question to answer. The south-west monsoon is about to break, when very heavy weather will be experienced on the Incline, when movements of a more or less serious nature are almost sure to occur.

There is no evidence, however, that leads me to suppose that the places on the Incline referred to above are any worse than they were before the monsoon last year.

If the portions of the Incline referred to above are carefully patrolled by intelligent men, and proper precautions are taken during the heavy monsoon weather, I see no reason why the traffic should be stopped.

I am, &c.,

GEORGE G. DIXON.

No. 17.

The Hon. the COLONIAL SECRETARY to the GENERAL MANAGER, Ceylon Government Railway.

Colonial Secretary's Office,

No 393. Colombo, May 22, 1903.

Kadugannawa Incline.

SIR,—I AM directed to acknowledge the receipt of your letter No. 512 of 12th May, forwarding the joint report of the Committee appointed to report on the condition of the Kadugannawa Incline and the works to be undertaken on the Incline, &c., and to request you to be good enough to thank the Committee, on behalf of Government, for their valuable report. I forward herewith four copies of the report, together with copies of Messrs. Middlemiss and Dixon's reports, for the use of the members of the Committee.

2. His Excellency desires to know whether the Committee agree with Mr. Dixon that in the case of the question raised in Mr. Dixon's sections Nos. 1, 2, and 3, the tunnel should begin below the "Lion's Mouth" and come out near the staircase on the upper end.

3. I am also to inquire whether you have taken steps to give effect to Mr. Middlemiss' recommendation as to the method of watching the fissures referred to in the last paragraph of his report.

4. I am to inquire further when the survey referred to in paragraph 1 of your letter No. 417 of 21st April will be completed, and the plans, &c., ready for transmission to the Consulting Engineers.

5. I enclose herein a draft of a letter which it is proposed to send to the Crown Agents, and I am to inquire whether the Committee have any suggestions to offer.*

I am, &c.,
A. R. SLATER,
for Colonial Secretary.

No. 18.

The Hon. the COLONIAL SECRETARY to Messrs. G. P. GREENE and H. OLIVER.

Colonial Secretary's Office,
No. 393/8482. Colombo, May 22, 1903.

Kadugannawa Incline.

GENTLEMEN,—IN forwarding to you herewith a copy of the joint report of the Committee appointed to report on the condition of the Kadugannawa Incline and the works to be undertaken on the Incline, &c., together with copies of reports by Messrs. Middlemiss and Dixon, I am directed to state that His Excellency the Governor desires you to submit a supplementary report containing a list of all works, great and small, which it is proposed to undertake in accordance with the recommendations of the Committee and of Mr. Middlemiss, and to state by whom and when each work is to be done, *i.e.*, by the Railway or the Construction Department. This list should be followed as soon as possible by an estimate of cost of the works proposed.

I am, &c.,
A. R. SLATER,
for Colonial Secretary.

No. 19.

The GENERAL MANAGER, Ceylon Government Railway, to the Hon. the COLONIAL SECRETARY.

General Manager's Office,
No. 573. Colombo, May 28, 1903.

Kadugannawa Incline.

SIR,—IN reply to your letter No. 393/8482 of the 22nd instant, I have the honour to state that I have submitted the various questions raised by His Excellency the Governor to the Committee, and the following are the replies to the same.

2. As regards paragraph 2 of your letter, the Committee are agreed that it will be cheaper to remove the remainder of the "Lion's Mouth" and to commence the tunnel above the same, coming out at a spot close to the staircase at the upper end. The exact spot has not yet been decided upon.

3. As regards paragraph 3, steps are being taken to give effect to Mr. Middlemiss' recommendation as to the method of watching the fissures.

4. As regards paragraph 4, the exact date of the completion of the survey cannot be definitely stated, as it is dependent on the weather, but it is hoped that it will be finished before the end of next month. The commencement of the preliminary work for the tunnelling operations need not be delayed by this.

5. As regards paragraph 5, it is considered that the only work which should be undertaken by the Construction Department is that of the tunnelling and the approaches thereto, the remainder of the work being carried out by the Open Line Department.

6. It is recommended that the drawing up of the estimate shall be undertaken by Mr. Oliver and not by the Consulting Engineers, the estimate being subsequently submitted to the latter for approval, as this is the course usually adopted. Mr. Oliver has already furnished the Consulting Engineers with such particulars as will probably enable them at once to take steps for sending out the necessary plant and supervising staff, on receipt of a telegram from Government to the effect that the tunnels have been decided upon. It is considered that the preparation of the estimates by the Consulting Engineers would involve an undesirable delay in commencing the work.

7. Mr. Oliver will, in preparing the estimate, state what portion of the total amount should be provided in the Supplementary Estimates for the current year. The draft letter to the Crown Agents is returned herewith, with some suggested alterations pencilled in.

I am, &c.,
G. P. GREENE,
General Manager.

No. 20.

The CHIEF RESIDENT ENGINEER, Northern and Uda Pussellawa Railways, to the Hon. the COLONIAL SECRETARY.

Railway Extension Office,
No. 325. Kandy, May 27, 1903.

Kadugannawa Incline.

SIR,—WITH reference to your letter No. 393/8482 of the 22nd instant to the General Manager of the Railway and myself, I have the honour to state that I have conferred with that officer, and it has

* See No. 26.

been considered advisable that the two tunnels with their approaches at 58¾ miles and 63½ miles, which are considered necessary on the Kadugannawa Incline, should be constructed by my Department, and that the rest of the works, a list of which will be sent you by the General Manager, should be carried out by the Open Line Department. The tunnels or rather the approaches to them can be begun as soon as the surveys which are now being made by Mr. Firbank of this office under my supervision are finished. They will probably be finished before the end of next month, when the estimate of cost will be made and submitted.

I have, &c.,
H. OLIVER,
Chief Resident Engineer,
Northern and Uda Pussellawa Railways.

No. 21.

The Hon. the COLONIAL SECRETARY to the CHIEF RESIDENT ENGINEER, Northern and Uda Pussellawa Railways.

Colonial Secretary's Office,
No. 162. Colombo, June 2, 1903.

Kadugannawa Incline.

SIR,—IN forwarding to you the enclosed copy of an extract from a letter received from the General Manager of the Railway on the above subject,* I am directed by His Excellency the Governor to request you to be so good as to furnish me with a copy of the communication addressed by you direct to the Consulting Engineers, or with a list of the requirements furnished by you to the Consulting Engineers.

2. I am to remind you that communications of this nature should pass through this office.

I am, &c.,
A. R. SLATER,
for Colonial Secretary.

No. 22.

The GENERAL MANAGER, Ceylon Government Railway, to the Hon. the COLONIAL SECRETARY.

General Manager's Office,
No. 592. Colombo, June 2, 1903.

Kadugannawa Incline.

SIR,—IN reply to your letter No. 393/8482 of the 22nd ultimo, addressed jointly to the Chief Resident Engineer, Northern and Uda Pussellawa Railways, and myself, I have the honour to state that in accordance with the recommendation of the Kadugannawa Incline Commission to the effect that only the tunnels and their approaches should be carried out by the Chief Resident Engineer, I enclose herewith a statement showing all the other works, great and small, which I propose to undertake, and also the order in which they should be carried out, with an estimate of the cost of the work. I cannot name the exact dates on which each portion of the work will be undertaken, but it will be proceeded with at once on successive Sundays.

2. For the purpose of carrying out some of the larger works it may be necessary to close the line on one or two Sundays, or to transfer passengers, and I would ask for general authority to arrange and advertise this, on the understanding that I shall put the public to as little inconvenience as possible.

3. As regards the note on the statement regarding the removal of the remainder of the "Lion's Mouth," it is not proposed to entirely close the line for this work, but only to transfer passengers (unless the work falls on a Sunday, when the line is closed for other blasting, as mentioned above).

4. As regards the cost of the work, I am reporting separately on the expenditure on the vote of Rs. 45,000, and suggesting that a supplementary vote be granted for the completion of the work. I enclose a key plan No. 09 of the various works.†

am, &c.,
G. P. GREENE,
General Manager.

---

* See No. 19, *ante*.

† Not reproduced.

Kadugannawa Incline.

List of Doubtful Places.

Index Number or Letter on Plan.	Mileage.	Approximate Estimate.	Order of coming down.	Description.	Remarks.
	M. C.	Rs.			
1	56 50	400	—	Slab of rock ...	Already drilled to be taken down
2	58 0	25	—	Large rock with tree growing into crevice	To be cemented up and carefully watched
3	58 47	50	—	Loose rock ...	To be taken down
A	58 75	650	1st	Meeangalla Galleries ...	All cracks cemented and very carefully watched ; loose rock on top to be blasted down
4	59 73	400	2nd	Slab of rock ...	Already drilled to be taken down
5	60 66	15	—	Rock supported by dry wall	Wall to be carefully pointed with cement and watched
6	61 6	1,000	4th	Rock at end of crevice (Sensation Rock)	To be blasted away to about 5 ft. above rail level
B	61 10	—	—	Large collection of badly weathered rocks overhanging Sensation Rock	Already cemented, to be watched carefully
7	61 15	1,000	3rd	Large slab over Sensation Rock	To be cemented and taken down
8	61 16	25	—	Boulder with crevice under line, Sensation Rock	Cracks and weathered; bedding to be cemented and watched
9	61 55	25	—	Rock holding up soft material	To be cemented and watched
10	61 65	60	—	Crevice in approach to cutting to No. 8 tunnel	To be filled in with concrete, cemented, and watched
11	62 45	150	—	Rocks on top of cutting...	To be taken down and tree removed
12	62 76	25	—	Scaling pieces of rocks on top end of tunnel No. 9	To be taken down early
13	63 35	150	—	Large boulders at side of line	Masonry wall built under, on good foundation, cemented, and carefully watched
14	63 40	5,000*	—	Lion's Mouth (remaining portion)	To be taken down gradually ; cracks already cemented to be carefully watched
C	63 44	—	—	Crevice in rock ...	Crevice to be carefully watched
D	63 44	—	—	Large boulder under line	Concreting to be carefully examined for cracks
E	63 45	500	—	Crevice ...	Crevice to be cleared out and filled in with concrete below and the top pitched in with rubble and cemented. To be carefully watched for any movement of rock
15	63 53	100	—	Loose rocks ...	To be barred down
16	63 61	20	—	Large rock on top of slope	To be cemented and watched
17	63 63	15	—	Rocks with longitudinal bedding	Beds cleared out and cemented in places and carefully watched
18	63 70	50	—	Roof of tunnel No. 10 ...	To have pieces blasted out
19	63 78	25	—	Rocks ...	Earth to be cleared out and cracks cemented and watched
20	64 15	550	—	Loose slab on high rock overlooking railway	To be cemented and carefully watched
21	64 26	75	—	Large boulder at side of railway	Opening between two boulders to be cemented and watched
22	64 38	300	—	Large block of rock ...	Already drilled to be taken down
		10,610			
Contingencies at 10 %		1,060			
		11,670			

* Estimate based on the assumption that possession of line can be obtained for four Sundays.

No. 23.

The Hon. the COLONIAL SECRETARY to the GENERAL MANAGER, Ceylon Government Railway.

Colonial Secretary's Office,
No. 448. Colombo, June 9, 1903.

Kadugannawa Incline.

SIR,—IN acknowledging the receipt of your letter No. 592 of 2nd June, I am directed to inform you that His Excellency the Governor has been pleased to approve of the works on the Kadugannawa Incline, except the tunnels and their approaches, being undertaken by your Department.

2. I am also to inform you that the authority applied for by you is granted to close the line on Sundays when necessary, or to transfer passengers, &c., when some of the larger works are being carried out.

3. I am to request you to submit a monthly progress return of the works undertaken by your Department.

I am, &c.,
A. R. SLATER,
for Colonial Secretary.

No. 24.

The CHIEF RESIDENT ENGINEER, Northern and Uda Pussellawa Railways, to the Hon. the COLONIAL SECRETARY.

No. 340.

Railway Extension Office,
Kandy, June 3, 1903.

Kadugannawa Incline.

SIR,—IN reply to your letter No. 162/010652 of yesterday's date, I have the honour to state that I informed the Consulting Engineers in a private letter written on the 20th April last that in the event of Government deciding to have the tunnel work on the Kadugannawa Incline carried out by this Department, I should be glad of their advice as to what tunnel-boring machinery should be used, and also that one experienced and able assistant and two good tunnel foremen would be required, and I wrote: "If it is decided to make the tunnels, I propose to telegraph to you the words 'Incline Tunnels,' or 'Incline Tunnel' if one only is to be made, adding 'Meeangalla' or 'Arches,' to let you know which one is to be made. If this telegram is sent, it will be to ask you to be good enough to arrange engineer, foremen, and machinery as you may consider necessary."

It appears to me that I was not in a proper position to write such as the above in an official letter until I had received instructions to carry out the work. My intention was to inform you what I have written to save time, immediately after it was decided that this Department was to do the work, if such decision was arrived at, and to suggest that the telegram should be sent.

I have, &c.,
H. OLIVER,
Chief Resident Engineer,
Northern and Uda Pussellawa Railways.

No. 25.

The Hon. the COLONIAL SECRETARY to the CHIEF RESIDENT ENGINEER, Northern and Uda Pussellawa Railways.

No. 169.

Colonial Secretary's Office,
Colombo, June 12, 1903.

Kadugannawa Incline.

SIR,—I AM directed to acknowledge the receipt of your letter No. 340 of 3rd June, 1903, regarding the communication addressed by you to the Consulting Engineers on the subject of the tunnel work to be undertaken on the Kadugannawa Incline.

2. I am to state that the letter which you term "a private letter" should have been sent through this office, and to inform you that inconvenience has been caused owing to your correspondence with the Consulting Engineers having been conducted in this manner, and to the Government being consequently ignorant of the views and recommendations which you have made to the Consulting Engineers on this important subject.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 26.

The Hon. the COLONIAL SECRETARY to the CROWN AGENTS FOR THE COLONIES.

No. 381.

Colonial Secretary's Office,
Colombo, June 13, 1903.

GENTLEMEN,—WITH reference to my letter No. 256 of the 27th April regarding the dangerous condition of the Kadugannawa Incline, I am directed to transmit herewith, for the information of the Consulting Engineers, a copy of the report of the Committee appointed to report on the condition of the rocks on the Incline, and also as to the feasibility of tunnelling proposed by Mr. Oliver, and to state that His Excellency proposes to entrust the work of constructing the tunnels and their approaches to the Construction Department. His Excellency considers that the work should be proceeded with as soon as possible, as it is possible while the south-west monsoon continues that it may be necessary at any moment to stop traffic at the dangerous places, to the great loss and inconvenience of the Colony. Mr. Oliver has been accordingly requested to submit an estimate of the cost of the operation as soon as possible, so that the necessary portion of the total amount may be provided in the Supplementary Estimates for the current year, and this estimate will be forwarded to you so that it may be submitted to the Consulting Engineers for approval.

2. I am to add that a survey in connection with the proposed tunnelling operations has been undertaken by Mr. Oliver, and is approaching completion. The plans will be forwarded shortly. Meanwhile the Consulting Engineers should be requested to take steps to procure and send out the necessary plant and supervising staff at once and without waiting for the detailed estimate. It is understood that details which will enable them to do this have already been sent direct to the Consulting Engineers—somewhat irregularly—by Mr. Oliver.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

XXV.—1903.

REVIEW OF THE TRADE IN CEYLON FOR THE YEAR 1902.

Ordered by His Excellency the Governor to be Printed.

Colombo:
PRINTED BY G. J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 15 cents.

1903.

REVIEW OF THE TRADE IN CEYLON

FOR THE YEAR 1902.

GENERAL SUMMARY.

THE trade of the year 1902 exhibits some recovery from the depression of 1901, when there was a marked decrease in the value of imports and exports as compared with the two preceding years. The tea industry being the most important factor in the trade of the Colony, the two principal articles imported, viz., grain and cotton goods, are found to be immediately affected by the condition of that staple. With the improvement shown in our leading industry the Customs revenue derived from imports naturally rose, and the seventy-six lacs of revenue obtained in 1900, the previous record year, were again reached.

The manufacture of green tea is rapidly increasing, thanks partly to the bounty of 4 cents a lb. paid by the Thirty Committee from the tea cess, but also in great measure owing to the fact that consumers in the United States for the most part demand green tea in preference to black, and that it has been recognized that it is better policy to supply what is asked for rather than to endeavour to force on the consumer an article which is not yet so generally popular.

The export of products of the cocoanut palm continues to steadily increase, with the result that though tea is still by far the most important article of commerce that the Island produces, yet the proportion which it bears to the total export of the Island is very much lower than it was eight or ten years ago. It is now approximately 50 per cent. In 1896 it was over 60 per cent.

Exchange has been steady throughout the year, the highest rate being 1*s.* $4\frac{3}{32}$*d.* (demand) and the lowest 1*s.* $3\frac{15}{16}$*d.*, or a difference of only $\frac{5}{32}$. In the previous year the difference between the maximum and the minimum rates was $\frac{7}{32}$, or 1·4 per cent., whilst in the two preceding years the difference was 3·3 and 2·6 respectively. The knowledge that exchange will remain steady must tend to place business on a sounder footing, as the merchant has but to consider the actual cost of the article, and not in addition the violent fluctuations in exchange.

The deficiency of silver which at one time threatened to be serious was supplied towards the end of the year, and does not seem to have materially affected the course of trade. The report of the Chamber of Commerce states that money locally was plentiful, especially about the middle of the year, at which time the rate was as low as 4 per cent.

The actual value of trade for the year is attached, with the value of the preceding four years for comparison. In 1886 it only amounted to Rs. 162,436,016.

In that year the trade of India amounted approximately to twelve times the value of the trade of Ceylon, whilst last year that of Ceylon was about one-tenth of India, though our population is only about one-eightieth of that country.

Year.	Rs.	Year.	Rs.
1898	181,326,925	1901	204,232,206
1899	213,007,870	1902	208,614,933
1900	220,550,716		

Imports of Merchandise.

The value of the imports of merchandise was over six million rupees less than that of the preceding year, a result due in great measure to a decrease in the value of coal imported and of Government, including Military, Stores. In the case of Military Stores the reduction was due to the omission of their value in the bills of lading, and not to any actual falling off in the quantity imported. The value of imported merchandise stated in the average of quinquennial periods is as follows :—

Year.	Rs.
1888–1892	57,150,000
1893–1897	74,803,000
1898–1902	101,108,000

These figures show clearly the great advance that has been made in the trade of the Colony in the last fifteen years. The value of imports under each of the headings under which articles are grouped was :—

	1901. Rs.	1902. Rs.
Animals, Living	1,614,323 ...	1,442,373
Articles of Food and Drink	51,209,846 ...	50,755,749
Narcotics	883,267 ...	805,024
Raw Materials (Textile)	156,181 ...	217,722
Do. (Metal)	488,826 ...	702,319
Do. (Other)	14,748,343 ...	11,992,194
Manufactures (Textile)	8,930,583 ...	8,320,639
Do. (Metal)	4,312,500 ...	3,357,693
Do. (Other)	22,941.751 ...	20,280,475
Bullion, Coin, and Precious Stones ...	8,582,897 ...	11,588,087

The most serious falling off was in "Raw Materials (Other)," under which heading coal is classified. Government and Military Stores come under the headings "Manufactures (Metal and Other)," in which also there is a considerable decrease. There is a slight falling off under the heading "Articles of Food and Drink," mainly due to a somewhat reduced importation of rice.

In the following table the increase or decrease in values of the principal items as compared with 1901 is shown in lacs :—

Articles.	Increase. Lacs.	Decrease. Lacs.
Cotton Goods	2¼ ...	—
Metal and Metalware...	1¾ ...	—
Cement (exclusive of Government Stores) ...	— ...	¼
Manure	3¾ ...	—
Kerosine Oil	— ...	4¼
Coal	— ...	24¼
Live Stock	— ...	1½
Woollen Goods	— ...	1⅜
Spirits	— ...	⅕
Wine	— ...	⅕
Narcotics	— ...	¾
Sugar	⅕ ...	—
Silk	— ...	2¼
Grain	— ...	7½
Oil (other than Kerosine)	— ...	½

In the following paragraphs the most important variations in the principal items in each group are noted :—

Animals, living.—The decrease of 1½ lac is due to a smaller importation of cattle and goats (7,900 head), and to a lower valuation of the horses imported amounting to one-third of a lac, though the number was larger than in 1901. Whether this was actually due to the importation of an inferior and cheaper class of animal, or merely to an arbitrary alteration in the values, it is not easy to say. It has been suggested that the importation of valuable racehorses from Australia might account for the higher value in 1901, but the numbers of that class of horse are so small that the explanation would not cover the large difference in values.

Articles of Food and Drink.

Grain.—The figures for rice show a decrease of 718,000 bushels compared with 1900, which was the highest on record. As compared with 1901, there was a comparatively small falling off amounting to 77,000 bushels. The price has remained steady throughout the year with a maximum of Rs. 3·45 and a minimum of Rs. 3·10 per bushel for soolai. The figures for the last three years are as follows :—

Year.	Bushels.
1900	9,592,323
1901	8,951,650
1902	8,873,871

These last figures may now be considered normal. They are over a million bushels in excess of the import in 1896.

Fish.—This is an important item of trade. The imports for the present year are half a lac higher than in 1901. In the past three years the figures are as follows :—

Year.	Lacs.
1900	34
1901	38
1902	38½

It is not altogether satisfactory that the Island should have to import so much fish, when our waters are swarming with them. A steam trawler has lately been tried, but the experiment does not appear to have been successful. Government grant special terms for salt at certain fish-curing yards, but the amount cured at these places has no appreciable effect on our imports.

Liquors.—Of malt liquor, the quantity entered for home consumption during the last three years was :—

Year.	In Bottle. Gallons.	In Wood. Gallons.
1900	108,000 ...	167,000
1901	119,000 ...	220,000
1902	89,798 ...	226,241

There has been a considerable increase in the import of beer in cask during the last two years, but that in bottles has fallen off. The locally manufactured beer in Nuwara Eliya appears to be improving in quality, and the consumption of it is on the increase.

The imports of wines show no tendency to increase, the duty for the last three years being as follows :—

Year.	Rs.
1900	60,863
1901	57,007
1902	57,971

whilst there was a decrease last year of over Rs. 20,000 in value as compared with the previous year.

Spirits, on the other hand, steadily increase year by year, and the Customs revenue from this source now amounts to nearly ten lacs of rupees.

There was a notable increase in the import of brandy and gin, whilst, on the other hand, whisky, contrary to what might have been expected, showed a falling off both in value and duty.

Provisions.—Of miscellaneous provisions (flour, tinned provisions, biscuits, &c.) 49 lacs worth were imported in 1902 as against 46 lacs in 1901. Flour alone accounts for an increase of two lacs and biscuits of a quarter of a lac.

Curry Stuffs are largely imported, and for the last two years the value exceeded 15 lacs annually. Here, again, there seems room for local enterprise, and for a considerable increase in the home production of these articles.

Spices.—Pepper and ginger alone are imported in any quantity. The increase in the latter commodity has been very marked, having risen steadily year by year from Rs. 20,937 in 1899 to Rs. 50,241 in 1902.

Fresh Fruit to the value of nearly half a lac was imported in 1902 as against Rs. 19,000 worth in 1899. It is not, however, likely that there will be any further material increase in this trade.

Sugar.—The trade in this article has shown a notable increase. For the last three years the figures are as follows :—

Year.	Cwt.
1900	200,806
1901	188,369
1902	218,074

The increase is almost entirely in refined sugar, as there was a falling off in palm and jaggery imported from India.

As regards the principal sources of supply, Austria and Germany have to be classified together, as much of the sugar shipped at Hamburg is manufactured in Bohemia. These countries now take the leading place in the supply of this article, and the figures are most significant. In 1899 the import from Austria and Germany amounted to 36,000 cwt. It has risen rapidly each year, and in 1902 was 96,000 cwt.

From India the import has declined from 46,900 cwt. in 1899 to 30,200 cwt. in 1902. The imports from China and Hongkong have in the same period remained stationary, 81,000 cwt. having been imported in 1899 and the same quantity last year.

The bounty-giving countries appear bound to oust the Indian trade in this article, unless countervailing duties are placed on imports from such countries, and even then the cheap silver of China would probably defeat the Indian producer. It is somewhat strange at first sight that Mauritius should not be able to supply this Colony, seeing that the people of Western India are large consumers of that sugar, but the cane sugar cannot compete with beet.

Narcotics.

There was a slight increase in opium of 273 lb. as compared with 1901, but a decrease of nearly 2,500 lb. compared with 1900.

Tobacco shows a decrease of 37,600 lb., but cigars an increase by 1,720 lb. The local crop was good, but this scarcely explains the falling off in imports, as the home and imported articles do not practically compete with each other.

Oils.

Kerosine Oil.—The trade in this article has steadily expanded in spite of the comparatively heavy duty of 25 cents a gallon placed upon it. Since 1897, when the amount entered for home consumption was 1,856,000 gallons, there has been a yearly increase, and in 1902 the import had reached 2,867,818 gallons. This result is no doubt due in great measure to the saving effected in cost by importing the oil in bulk, so that the consumer now pays less for his oil than he did before the duty was enhanced in 1891. The American case oil trade is no longer prominent, as the native consumer is content with the cheap bulk oil, and gas and electricity are superseding kerosine with an increasing number of the well-to-do classes.

Of other oils, lubricating oil has increased from a value of Rs. 6,427 only in 1899 to Rs. 122,734 in 1902.

Raw Materials.

Coal.—There was a considerable decrease in the import of coal as compared with the last two years, the figures being :—

Year.	Tons.
1900	590,099
1901	627,728
1902	532,159

There has, however, been no decrease in the import from the United Kingdom, which amounted to 288,362 tons, as against 286,842 tons in 1901. The decrease was due to the falling off in the imports of Indian coal, which were nearly 90,000 tons less than in 1901. The reason for this decrease appears to be that the price of Cardiff coal was in the two previous years very high. It was however necessary to supply it to the numerous men-of-war and transports, both British and foreign, that passed through Colombo on their way to China at the time of the Boxer rising and the siege of Pekin, and the amount imported did not, therefore, fall off in spite of its high price. This however gave a great stimulus to the import of Indian coal for ordinary trade purposes, but when the price of Welsh coal fell to its normal level, the Indian article was no longer able to compete on specially favourable terms, and naturally the trade in it declined. Though there has been a falling off in the general import as compared with the last two years, the increase over the years preceding 1900 is considerable. In 1896 the import was only 354,059 tons, or more than 50 per cent. less than last year.

Manufactured Articles.

Cotton Goods.—After the heavy falling off in 1901, there was a slight recovery in this branch of trade during the past year. Imports from the United Kingdom continued to decline, and there was a considerable decrease in the imports of gray cloth. Bleached and dyed goods, however, show a corresponding increase. The imports from "British Colonies," under which heading India comes, exhibit a return to the figures of 1900. Those from "Foreign Countries" indicate a slight recovery from the depression of 1901, but are still little more than half of what they were in 1900.

The trade in cotton goods and in grain is a fair reflex of the general condition of business in the Island.

Metals and Metalware.

Here, again, there was a moderate increase of about 1½ lac in value over the imports of 1901, after a drop of 20 lacs as compared with 1900. There has now been a return to the figures of 1899, viz., 40 lacs. The most noticeable increases were in pig lead, tin slabs, and iron drums; whilst pig iron, tea lead, electroplate, and steelware showed a considerable decrease.

Manure.—The value of manure imported was some 50 per cent. over the figures of 1901, and amounted to Rs. 1,316,000. The most important item is castor seed poonac, of which 4½ lacs worth was imported.

Specie.

There was an increase of over 30 lacs in the import of specie, mainly owing to large importations of gold, which amounted to nearly 55 lacs in excess of the previous year. There was a decrease of nearly 25 lacs in the import of silver. This remarkable result was due to the action of the recent Currency Ordinance, No. 13 of 1901, under which gold was made legal tender. The Banks found it to their interest to import gold, and exchange it at the Treasury first into notes and then into silver. The burden of importing silver was thus thrown on Government. A Commission was appointed by the Governor to inquire into this question, and suggested an amendment of the Ordinance to meet the difficulty. The action of the Banks was met by the Treasury exercising the option granted by law of paying notes in gold, and the disturbance of the local currency, which resulted from the stoppage of the import of silver, has now practically ceased.

General Distribution of Import Trade.

The value of the imports of foreign merchandise in the last three years was thus distributed among the principal countries with which trade is carried on :—

Percentage of whole Trade.

	1900.	1901.	1902.
British India	49	51	50
United Kingdom	29	29	27
Burma	4	4	4½
Australasia	nearly 1	nearly 2	nearly 1½
India (excluding British)	nearly ⅔	1½	2¼
Austria	nearly 1½	½	1
Maldive Islands	1½	1¾	2
Japan	nearly 1	nearly 1	1
Straits Settlements	1	1	1¾
Russia	1	1½	1
Germany	2	1¾	1½

From no other country did the imports amount to 1 per cent. in 1902.
The large proportion which India bears to the total is mainly due to the importation of grain.

EXPORTS.

The value of exports, omitting specie, for the last five years is as follows :—

Year.	Rs. c.	Year.	Rs. c.
1898	93,801,890 13	1901	100,182,170 0
1899	111,405,649 99	1902	110,731,670 0
1900	106,006,460 55		

Including specie, the exports for 1902 amounted to Rs. 11,900,170, distributed as follows :—

	Rs.
Ceylon Produce	96,771,467
Imports re-exported	1,462,923
Specie	1,168,500
Coal for steamer use	12,497,280
	111,900,170

The value of Ceylon produce for the last five years is as follows :—

Year.	Value. Rs.	Year.	Value. Rs.
1898	83,288,352	1901	85,977,410
1899	100,095,681	1902	96,771,467
1900	90,868,532		

The principal articles exported, with their values, for the last three years are as follows :—

Articles.	1900. Value in Rs.	1901. Value in Rs.	1902. Value in Rs.
Tea	53,735,257	47,610,950	54,298,694
Produce of the Cocoanut Palm	16,438,307	17,970,835	20,861,491
Cacao	1,651,146	2,321,331	2,537,764
Coffee	593,634	537,482	639,795
Plumbago	9,792,495	9,609,642	10,516,366
Cardamoms	804,368	694,874	821,027
Cinnamon	2,549,762	2,386,802	2,468,948
Citronella Oil	818,048	797,559	727,872
Timber	253,759	286,218	325,610
Tobacco	981,840	674,181	1,029,806
Cinchona	64,976	49,998	27,635

The noticeable features of this table are: first, the increase in the value of tea, which, after the set back in 1901, has resumed its normal progress, for until 1901 every year had exceeded its predecessor; secondly, the increasing importance of the produce of the cocoanut palm; and thirdly, the recovery in the plumbago industry, which has resumed normal proportions after the collapse consequent on the inflated value of the article in 1899.

Articles of Food and Drink.

Tea.—The figures for the last three years are as follows:—

Year.	lb.
1900	149,264,602
1901	144,275,608
1902	150,829,707

There has been a recovery from the sharp drop in 1901, and a slight increase is shown over the figures for 1900.

Green teas were shown separately in 1901 for the first time, and bid fair to become an important factor in the trade of the Island. The quantity exported in 1902 was more than double that of 1901, whilst at the same time prices were higher. The following are the figures for the last two years:—

Year.	lb.
1901	1,250,490
1902	2,602,882

and the principal consumers are—

	1901.	1902.
United Kingdom, taking	260,949	411,514
Canada	549,013	736,534
United States	360.374	1,264,303
Russia in Asia	38,255	133,180
British India	17,443	27,760
Hongkong	—	24,080

The development of the trade with America is the most marked feature in this list. The export of green tea to that country last year nearly equalled the total export to America in 1901 of black and green tea combined.

The manufacture of this article is said to have been greatly improved, and there are now factories in Colombo where the special glazing process necessary to give the proper finish to green tea is carried on. Hongkong for the first time appears among the places to which green tea is exported. The tea is however intended for Russia.

With regard to the general distribution of Ceylon Tea, the following table gives the amount taken in millions of pounds:—

	1901.	1902.
United Kingdom	102·9	103·5
Australia	20·6	18·8
Russia	9·6	11·4
United States	1·5	3·7
Canada	3·3	4·9
China	2·6	4·5
India	1·1	·8

There is a considerable falling off in the export to Australia, due it is said to shipments being hurried forward in 1901 in anticipation of enhanced duty; and secondly, to dullness of trade caused by the prolonged drought.

With our other principal customers there has been an increased trade, except in the case of India. It is perhaps not surprising that there should be a falling off in the trade with India, as there is an import duty, which, though only 5 per cent. *ad valorem*, should enable the home-grown teas to successfully defy competition from outside.

The import to the United Kingdom was stationary after the heavy drop of 12 millions from 1900.

The quality of our staple has been well maintained, thanks to the finer plucking which is now the rule in low- as well as high-grown tea.

With regard to the price the report of the Chamber of Commerce is as follows:—

> Common teas kept their prices well until the latter part of September, when a fall took place lasting about four weeks. They recovered again late in October, and remained firm for the rest of the year.
>
> Fine teas held their own throughout the year, and have been in continual demand, but medium sorts suffered in price and sold constantly in buyers' favour.

About a third of the whole crop was offered for sale in Colombo, and a little over a fourth was actually sold. The average price at the Colombo sales was half a cent a lb. higher than in 1901, whilst that in London was somewhat better than in the local market.

Produce of the Cocoanut Palm.—The following statement shows the value of the produce exported during the last four years :—

Article.	1899. Rs.	1900. Rs.	1901. Rs.	1902. Rs.
Arrack ...	110,820	73,652	72,082	106,332
Cadjans, &c....	—	—	—	—
Cocoanuts ...	417,230	646,340	773,391	711,918
Cocoanuts, Desiccated	2,294,732	2,237,547	2,314,708	2,870,549
Coir Fibre ...	330,301	718,298	700,683	778,174
Coir, Manufactured	7,871	9,857	10,561	11,559
Coir Rope ...	142,624	120,869	137,462	160,560
Coir Yarn ...	949,877	1,223,709	854,538	799,705
Coir Rugs ...	2,412	—	—	—
Copperah ...	3,195,807	3,930,694	4,540,693	4,098,947
Cocoanut Laths and Rafters ...	35	—	—	—
Cocoanut Oil	6,062,419	6,673,171	7,601,233	10,007,860
Cocoanut Shells	15,285	13,536	27,860	32,623
Poonac ...	823,980	790,634	937,474	1,283,264
Quills, Cocoanut Leaf	—	—	150	—
	14,353,393	16,438,307	17,970,835	20,861,491

Cocoanut oil, poonac, and desiccated cocoanuts all show a marked increase. The price of cocoanut oil was remarkably high at the beginning of the year, reaching Rs. 437·50 per ton. It fell off considerably towards the end of the year, dropping finally to Rs. 350 a ton, but even the lowest figure touched is remunerative to the producer.

There was an increase of over two million lb. in the export of desiccated cocoanut.

Exports of Cacao.

Year.	Cwt.	Year.	Cwt.
1899	42,528	1901	47,471
1900	33,696	1902	61,476

There has been a considerable increase over the figures of 1901, which was previously the highest on record, though there has been no marked extension of the area under cultivation.

The price has declined under the influence of larger stocks, but the industry is still highly remunerative under favourable conditions.

Cardamoms.—Exports have considerably increased :—

Year.	lb.	Year.	lb.
1899	496,138	1901	557,984
1900	584,063	1902	672,896

and the price has fallen some 25 per cent. owing to over-production, so that the position of this industry is causing anxiety. The principal customers are India, the United Kingdom, and Germany. Efforts are being made to push the trade in Australia, and generally to extend markets for this product.

Exports of Cinnamon.

Year.	lb.	Value. Rs.
1899	5,501,096	2,760,692
1900	4,616,108	2,549,762
1901	4,458,720	2,386,802
1902	4,365,872	2,468,948

Though the export of this article was slightly smaller than in 1901, the value was higher owing to better prices. In the last four years the falling off in production has been considerable, but this has acted favourably on values.

Exports of Coffee.

Year.	Cwt.	Value. Rs.
1899	19,145	1,350,413
1900	10,243	593,634
1901	9,090	537,482
1902	10,401	639,795

The export of coffee is now insignificant as compared with products like cacao, cinnamon, and even cardamoms.

Tobacco.

Year.	Quantity in Cwt.	Value. Rs.
1899	37,883	856,512
1900	42,523	981,840
1901	28,283	674,181
1902	43,982	1,029,806

The trade in tobacco is solely with Southern India. The figures for 1902 were the most favourable of the four, but it can hardly be expected that the tobacco grown in Jaffna and other dry districts in the north should be able to seriously compete with the home-grown article in India, unless more scientific methods of curing the product are adopted.

Exports of Arecanuts.

Year.	Cwt.	Value. Rs.
1899	99,836	1,289,059
1900	113,942	1,597,755
1901	104,215	1,611,546
1902	90,691	1,001,009

The trade in this article shows no tendency to increase. The export is almost entirely to India.

Rubber Seed and Rubber.

141 cwt. of seed were exported, British India taking 52 cwt. and Burma 80 cwt. To the United Kingdom 189 cwt. of rubber, valued at Rs. 39,333, were exported, as against 66 cwt., valued at Rs. 11,986, in 1901. There can be no doubt that the prospects of this industry are most encouraging. The consumption of rubber increases largely year by year, and so far the supply has not been able to keep pace with the demand. It grows readily both in the low-country and at medium elevations.

Customs Revenue.

The Customs Ordinance was amended at the end of 1902, but no important changes were made in the tariff. The Customs revenue for the year amounted to Rs. 7,630,175, the largest ever recorded. It is more than one-sixth of the revenue derived from Customs in India, though rates for the most part are not materially higher. Our general *ad valorem* duty is 5½ per cent. as against 5 per cent., and our rate is 4 per cent. for cottons (one of the most important items of import in both countries), as against 3½ per cent. in the adjoining continent.

In both there are special rates for spirits and petroleum. The most important items of duty here are grain, spirits and cordials, kerosine oil, sugar, and cotton manufactures.

Balance of Trade.

The figures appended give the relation which exports bear to imports in each of the last five years :—

Year.	Excess of Exports. Rs.	Excess of Imports. Rs.
1898	6,276,000	—
1899	9,863,000	—
1900	—	8,537,000
1901	—	3,867,000
1902	12,848,000	—

In the case of India exports always exceed imports.

SHIPPING.

The total number of vessels which entered and cleared from the ports of the Island during the last three years was as follows :—

Year.	Entered. No.	Entered. Tons.	Cleared. No.	Cleared. Tons.
1900	3,147	4,250,066	3,203	4,237,874
1901	3,367	4,557,607	3,436	4,470,963
1902	3,418	4,981,584	3,429	4,973,672

The steamer tonnage was nearly 98 per cent. of the whole. The number of steamers which entered Colombo, exclusive of those calling to coal and for orders, was 1,887, with a tonnage of 4,524,032, the average tonnage of each steamer being 2,397 tons. Of the 3,418 vessels that entered inwards, 2,867, or 83 per cent., flew the British flag. The proportion of tonnage was however barely 70 per cent. Germany comes next with 5 per cent. of the number and 13 per cent. of the tonnage. The high proportion of tonnage is due to the Norddeutscher Lloyd and Hamburg-American steamers, which are the largest merchant vessels that touch at Colombo.

France is third, with 3 per cent. of the number and a little under 6 per cent of the tonnage. The Japanese are not far behind the French, with nearly 5 per cent. of the tonnage, and their number is steadily increasing.

H. L. CRAWFORD,
Principal Collector of Customs.

June 15, 1903.

XXVI.—1903.

DESPATCHES

RELATING TO THE

APPOINTMENT OF UNOFFICIAL MEMBERS TO THE EXECUTIVE COUNCIL.

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 5 cents.

1903.

APPOINTMENT OF UNOFFICIAL MEMBERS TO THE EXECUTIVE COUNCIL.

No. 1.

Governor the Right Hon. Sir J. WEST RIDGEWAY, G.C.M.G., K.C.B., K.C.S.I., to the Right Hon. J. CHAMBERLAIN, M.P.

Miscellaneous.—No. 191. The Queen's Cottage, Nuwara Eliya, Ceylon, May 20, 1903.

SIR,—I HAVE the honour to address you regarding the appointment of Unofficial Members to the Executive Council of this Colony, which as at present constituted is composed entirely of Officials.

2. At a Meeting of the Legislative Council held on 10th February last the Hon. Mr. J. N. Campbell, representative of the General European Community, brought forward the following motion: "That this Council respectfully requests His Excellency the Governor to invite the Secretary of State for the Colonies to favourably consider the question of adding Unofficial Members to the Executive Council of this Colony."

3. This motion was put to the Council and unanimously agreed to, and I undertook to forward it for favourable consideration.

4. I am informed that in other Crown Colonies with a similar constitution, notably in Cyprus, provision is made for summoning Unofficial Members to the Executive Council, and I would submit for favourable consideration the proposal that two Unofficial Members should be added to the Executive Council of this Colony, with the provisos that their appointment should be for five years only and that they should only be summoned when matters were under consideration upon which the Governor especially desired their advice.

5. The appointment suggested would be unobjectionable, and, besides tending to satisfy the public opinion, which is in favour of more effective representation in the Government of the Colony, would formally place at the disposal of the Governor advice and information which it is not always possible to obtain from official sources.

6. The Executive Council agrees in this recommendation.

I have, &c.,
WEST RIDGEWAY.

No. 2.

The Right Hon. J. CHAMBERLAIN, M.P., to Governor the Right Hon. Sir J. WEST RIDGEWAY, G.C.M.G., K.C.B., K.C.S.I.

Ceylon.—No. 223. Downing street, July 3, 1903.

SIR,—I HAVE the honour to acknowledge the receipt of your despatch No. 191 of the 20th May, last, in which you recommend to my favourable consideration a resolution passed unanimously by the Legislative Council of Ceylon advocating the addition of Unofficial Members to the Executive Council.

2. I recognize the force of the arguments with which you support this proposal, and I need not say that I attach great weight to your opinion upon the question, as well as to the unanimous wish expressed by the Legislative Council. It appears to me, however, that the objections to the proposal outweigh the advantages that might result from its adoption, and I am not clear that they have been sufficiently appreciated.

3. It is hardly necessary to remind you that the change which you recommend is not supported by the analogy of the Government of India, nor by that of the Straits Settlements.

4. It is true that in the case of Hongkong it was decided in 1896 to place two Unofficial Members upon the Executive Council, but my reason for agreeing to this step was stated as follows:—"Whilst most of the larger Crown Colonies possess one or more Municipal Councils subordinate to the Colonial Government, in Hongkong there is no such institution. Moreover, it seems impracticable to alter this state of things.....This being so, in my opinion the most practicable course is to recognize that the Colonial Government is discharging Municipal duties, and that on that account representatives of the citizens may fairly be given a place on the Executive."

5. In the case of Mauritius, which is the only other Eastern Colony where Unofficial Members have been placed on the Executive Council, the change followed as a corollary of the admission to the Council of Government of elected representatives of the population. I may remind you also that in the case of Cyprus, which is referred to in your despatch, as well as in several other Colonies, there is an elective element in the Legislature.

6. I need hardly say that the special circumstances which justified the inclusion of Unofficial Members in the Executive Councils of Hongkong and Mauritius are absent in the case of Ceylon.

7. I do not overlook the fact that for a long time Government has acted upon the principle of giving a representative character to the unofficial element in the Legislative Council of Ceylon, Members being chosen to represent as far as possible the different races and the different interests of the Colony. But this fact appears to me to make it still more difficult to adopt the present proposal, The "representation" of the different factors of the population in the Legislative Council is not intended to be proportionate to their relative numerical or financial importance. The object kept in view is simply that of giving each section a voice in the making of the laws of the Colony and in regulating the public finance. But it would clearly be impossible to adhere to this principle in selecting two Unofficial Members for the Executive Council. Whatever criterion of suitability were adopted, some important sections would of necessity be left unrepresented.

8. You urge as an argument in favour of the proposal that it "would formally place at the diposal of the Governor advice and information which it is not always possible to obtain from official sources." This could hardly be denied, but I do not see that any special advantage will be gained by formally asking for advice which, I take it, is readily tendered under the existing condition of things whenever you choose to ask it. You are now free to consult any Unofficial Member of the Legislative Council, or indeed any inhabitant of the Island, informally or formally, on any question on which you think his opinion would be valuable. Under the system which you contemplate there would certainly be a tendency to confine such communications to the two Unofficial Members of the Executive Council, who would only represent certain interests, and whose advice might not be equally valuable on all important questions.

9. I note, moreover, that you propose that these Unofficial Members shall only be asked for their advice when the Governor thinks fit to do so. An Unofficial Member of the Executive Council who had a decided opinion upon an important question, but whose advice was (for whatever reason) not asked by the Governor when the question came before the Council, might justly complain that his position was invidious, and that his membership of the Council was more nominal than real. I hardly think that public opinion would be satisfied with this arrangement, and sooner or later pressure would be put upon the Governor to include the Unofficial Members in the Executive Council for all purposes. But a large proportion of the business of the Council appears to consist in advising the Governor in regard to the grant of leave and of pensions, in deciding appeals from Village Tribunals, and in considering other questions of a routine nature. Inconvenience might be caused if the papers on these subjects had to be circulated to Unofficial Members, and I do not see that the deliberations of the Council would be materially assisted.

10. I regret, therefore, that I cannot see my way to advise His Majesty to give directions for the proposed alteration in the constitution of the Executive Council. I earnestly trust, however, that this decision will not be interpreted as implying any lack of confidence, on my part, in the discretion or the ability of the Unofficial Members of the Legislative Council of Ceylon. I fully appreciate the value of the assistance which for so many years has been afforded by the representatives of the inhabitants in the important work of legislation and in the control of the revenue and the expenditure of the Colony. If I am compelled to set aside the present proposal, it is because I cannot see that any special advantage would result from its adoption, while the practical difficulties in the way seem to me to be very great.

I have, &c.,

J. CHAMBERLAIN.

XXVII.—1903.

PAPERS

RELATING TO

THE COMMISSIONS ON THE SCARCITY OF SILVER IN CEYLON.

(In continuation of Sessional Paper V. of 1903.)

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 35 cents.

1903.

134736

CONTENTS.

No.		PAGE
1	Governor the Right Hon. Sir J. West Ridgeway to the Right Hon. J. Chamberlain ...	3
2	The Right Hon. J. Chamberlain to Governor the Right Hon. Sir J. West Ridgeway	6
	The India Office to the Colonial Office	8
	The Treasury to the Colonial Office	8
3	Governor the Right Hon. Sir J. West Ridgeway to the Secretary of State for the Colonies	9
	The Colonial Secretary to the Hon. Mr. A. G. Lascelles, K.C., Chairman, Currency Commission...	11
	Report of the Commission appointed September 16, 1903 (with Appendices) ...	12

SCARCITY OF SILVER IN CEYLON.

No. 1.

Governor the Right Hon. Sir J. WEST RIDGEWAY, G.C.M.G., K.C.B., K.C.S.I., to the Right Hon. J. CHAMBERLAIN, M.P.

The Queen's House, Colombo, Ceylon, March 31, 1903.

Miscellaneous.—No. 108.

SIR,—IN continuation of previous correspondence, marginally noted,* I have the honour to address you regarding the question of the scarcity of silver, or rather of Indian rupees, in this Colony.

2. It may be convenient if I summarize the history of this question and the correspondence which has taken place regarding it. The proposal originally made to you by this Government (*vide* my despatch No. 40 of 30th January, 1900) was merely that the Commissioners of Currency should be empowered to hold a portion of their coin reserve in gold at the rate of one sovereign for fifteen rupees, as it was considered desirable to retain a portion of that reserve in coin with an intrinsic value and small bulk, rather than in coin of artificial value and large bulk. Section 4 of Ordinance No. 13 of 1901 would have been sufficient for this purpose. You, however, pointed out (in your despatch No. 424 of the 30th November, 1900) that this would necessarily involve the constitution of the sovereign as a legal tender (at the rate of fifteen rupees to the sovereign), since the Commissioners of Currency would otherwise be unable to pay out gold for notes. To this further step I saw no objection; on the contrary, it seemed to be an advantage to follow India in this direction, and to introduce the sovereign as a circulating medium in the Colony and as a means of foreign remittance, especially as the liability of keeping up the gold value of the rupee lay with India and not with Ceylon. I addressed you accordingly in my despatch No. 56 of the 25th February, 1901, and the sovereign having been constituted legal tender by His Majesty's Order in Council dated 26th September, 1901, section 3 was inserted in the bill which passed through the Legislative Council on 6th November, 1901. Section 11 of the principal Ordinance (No. 32 of 1884), as modified by this section, makes it compulsory on the Currency Commissioners to give currency notes for gold. No one in this Colony anticipated an inconveniently large influx of gold as a consequence; on the contrary, the difficulty we anticipated was the attraction of gold to an appreciable amount.

3. We were soon undeceived. Between November, 1901, when the Ordinance was passed, and the following April, when I proceeded to England to attend the Coronation, gold to the value of 2½ million rupees was imported into the Colony, and the silver reserve, which had been Rs. 4,961,609·56 when the bill was introduced, dropped to Rs. 2,386,609·56.

4. The reason was evident. Ceylon depends on India for its rupees, and up to the date of the passing of the Ordinance requiring the Commissioners of Currency to issue on demand currency notes for gold these rupees were regularly imported by the banks, who are compelled to import specie in order to meet their financial requirements. The rupees thus imported were readily absorbed by native traders for remittance purposes, and speedily found their way back to India in settlement of trade balances; but until last year the periodical imports of the banks sufficed for all needs.

5. After the passing of Ordinance No. 13 of 1901, however, the banks found themselves in a position to import their funds in a coin more easily and cheaply importable than the rupee. Accordingly, they not unnaturally curtailed, indeed practically discontinued, their importation of silver, without regard to the inconvenience which their sudden change of methods would cause the Colony.

6. The regular imports of silver having thus ceased, heavy demands on the stock in the Colonial Treasury followed, with the result to which I have already referred. An attempt was made by me to meet the difficulty by directing that the option of redeeming our currency notes presented by the banks with gold instead of silver should be freely exercised, and I also proposed, with your consent, to modify the Ordinance so as to give the Commissioners of Currency the option of refusing to issue notes in exchange for gold when it might be inconvenient to do so.

7. The question stood thus when I left for England at the end of April, but the scarcity of silver rapidly became more acute, and in May the bankers, whose action had been the cause of the scarcity, brought to the notice of the Chamber of Commerce the serious inconvenience caused to the general public by the refusal of the Commissioners of Currency to give rupees in exchange for notes. The Chamber, on the 14th May, addressed the Government in the following terms: "So far the question would appear to rest between Government and the banks, and this Chamber desires to express no opinion as to which party is responsible for the introduction of the necessary silver into the Island. It is true that this was formerly undertaken by the banks, but it must also be borne in mind that it is Government legislation, undertaken no doubt to secure some advantage to the Colony's revenues, that has made it now possible for the banks to finance in the manner indicated, and

* Mr. im Thurn's despatch No. 260 of 12th June, 1902, paragraphs 7 *et seq.*; Secretary of State's despatch No. 296 of 1st August, 1902, paragraph 3; Secretary of State's despatch No. 363 of 12th September, 1902; my telegram of 29th October, 1902; Secretary of State's telegram of 31st October, 1902; my telegram of 3rd November, 1902; Secretary of State's despatch No. 434 of 7th November, 1902; my despatch No. 515 of 12th November, 1902; Secretary of State's despatch No. 480 of 11th December, 1902.

apparently transfer the responsibility for maintaining the necessary supply of silver from themselves to the Treasury. The object of the Chamber in writing is, however, to draw attention to the serious consequences which may ensue, especially to the small trader, should the supply of silver bullion become unduly restricted. Large sums in rupees are in the aggregate taken away daily by coolies returning to their coast, and also by small traders proceeding to the South of India to purchase rice, cattle, &c., and indications are not wanting that the supply of silver is becoming thus restricted. Inquiry from reliable native sources fully confirms this view, and it has been further ascertained that money changers in the Pettah are already making an increased charge, though meanwhile but a small one, for changing notes for silver. This is tantamount to a depreciation having taken place in the value of Ceylon Government currency notes, and it is hardly necessary to point out the serious consequences that might result should this tendency be accentuated. In view, therefore, of the grave inconvenience already experienced, and the possibly more serious consequences which might easily ensue should the present stringency continue, I am to state that my Committee trusts the Government will lose no time in taking such measures as will restore the confidence of the public."

8. On 12th June Mr. im Thurn addressed to you his despatch No. 260, in which he dealt with a fall in the reserve of specie in the hands of the Commissioners of Currency, and also with the scarcity of rupees which had followed the passing of Ordinance No. 13 of 1901. He reported: "The banks have practically ceased to import silver, naturally preferring the cheaper and more convenient method of importing gold. The influx of silver (rupees) into the Colony has, to all intents and purposes, ceased; and consequently the drain of silver to India by native traders, which continues unabated, has to a great extent depleted the local supply of that metal. This diminution in the stock of silver gives cause for grave apprehension: for certain very considerable and important purposes silver is absolutely essential, and cannot be by any means adequately replaced by gold. The payment of agricultural labourers and artizans, the conduct of petty trade transactions—in fact, the entire minor business of the Colony—can be effected by silver alone; gold, owing to its much higher unit of value, being absolutely unsuitable for the purpose." Mr. im Thurn added that as a temporary measure he had met the difficulty by importing rupees from India at the cost of Government. He discussed various expedients which had been proposed for meeting the difficulty, and he also referred to my proposal to amend section 3 of Ordinance No. 13 of 1901, so as to leave it to the option of the Commissioners of Currency to demand either silver or gold in exchange for currency notes, "just as they can now under section 2 elect to redeem notes, according to their option, in either metal."

9. In your reply dated 12th September you enclosed a letter from the India Office relating to the policy of the Indian Government with regard to silver coin, and you expressed your unwillingness to amend Ordinance No. 13 of 1901 in the manner suggested in Mr. im Thurn's despatch above cited, "until further experience had been gained of the present system." In the communication referred to the India Office pointed out that "in India, when difficulty occurs through a deficiency in the supply of rupees, the Government of India has recourse to additional coinage." "The peculiarity in the position of Ceylon," the letter goes on to state, "is that additional rupees required by the population must be imported. Under the provisions of the notifications of the Government of India, the necessary supply can be obtained by Ceylon without difficulty, even if it does not occur in the ordinary course of banking and trade; and the only question appears to be whether in some cases the cost of sending gold to Madras and taking back to Ceylon the rupees obtained in exchange, which, it is presumed, cannot be very serious, should be borne by the Government or by the banks."

10. Although the India Office were right in assuming that the question of cost is not very serious, yet, I submit, it is wrong in principle that the cost of import should fall upon the general public instead of upon those constituents of the banks to whose action the scarcity is due, and by whom the rupees are chiefly required for the purpose of remittance. The India Office, in fact, overlooked a very important consideration, namely, whether the Ceylon Government should make itself responsible for the sufficiency of rupees in Ceylon for purposes of trade with India. This seems to me a very heavy responsibility, which, should a crisis occur, might entail still more embarrassing and dangerous responsibilities.

11. On my return to the Island at the end of October last I found that the difficulty of the situation had become much more acute, so much so that not only had the Treasury ceased to issue silver to banks in exchange for currency notes, but, although the Currency Commissioners had purchased from the banks nearly 1½ million of rupees between 2nd May and 11th September, they had been forced to refuse to meet more than one-fourth of the demands for silver made by private individuals on the same account. This was a serious step to take. The public, who had purchased the notes by the payment of silver on the understanding that they could always exchange them for silver, might not be justified in condemning their enforced partial redemption in gold as an act of repudiation, but undoubtedly it was liable to cause a depreciation in the value of our notes. I may here remark that this restriction has been removed.

12. A few days after my return to the Colony, *i.e.*, on the 28th October, I telegraphed to you that as the local banks had, since the passing of Ordinance No. 13 of 1901, found it more economical to import gold than silver, they were flooding the Treasury with gold, thus making silver very scarce, and reducing the quantity in the hands of the Commissioners of Currency. I therefore again proposed to amend section 3 of the Ordinance so as to make it optional, as I erroneously believed was the case in India, to refuse gold and to insist upon silver in exchange for currency notes. Your telegraphic answer of 31st October did not approve my proposal, and you referred me to the suggestion in paragraph 4 of your despatch No. 363 of 12th September, 1902, in which it was stated that the gold reserve against currency notes had only on two occasions exceeded the proposed limit of £100,000 (Rs. 1,500,000), and that recourse to legislation did not appear to be necessary to keep the gold reserve below that sum, especially if the Commissioners, whenever the gold reserve became too large, strictly exercised the option allowed them by section 2 of Ordinance No. 13 of 1901 of redeeming notes in gold or in silver at their discretion. To this I replied in my telegram of 3rd November that, although the course recommended by you had been adopted for some months, yet the importation of gold continued to increase, and the import of silver by the banks had practially ceased (the total import of silver between April and October, 1902, being only Rs. 3,267,938), while the export of silver continued; and that the gold reserve had risen to Rs. 6,000,000 (£400,000), against Rs. 2,000,000 in silver. At the same time I intimated to you that I was appointing a Commission, composed principally of bankers and merchants, to inquire into and report on the question, and that the Government would, meanwhile,

import silver when necessary. I added that if the Commissioners of Currency had the option of refusing gold for notes, as proposed by me, the banks would be forced to import silver, and the present difficulty would cease to exist.

13. In your despatch No. 434 of 7th November you informed me that you would await the further recommendation which would no doubt be made after the report of the Committee appointed to consider the question, and you stated: "I shall be glad if you will then furnish me with your views as to the expediency of repealing the Order in Council of the 26th September, 1901, since, as I have pointed out in paragraph 3 of my despatch No. 363 of the 12th September, the provisions of Ordinance No. 13 of 1901 appear to follow naturally from the fact that the gold sovereign is legal tender under the Order in Council above quoted, and I do not see how the Ordinance can be amended so as to enable the Currency Commissioners to refuse notes in exchange for gold sovereigns so long as the latter are legal tender."

14. The report of the Commission is now submitted.* I think you will agree that it is lucid and concise, and greatly assists the consideration, if not the settlement, of the question. It places beyond doubt, if ever there has been doubt, the gravity of the situation and the necessity of the early application of a remedy. It discusses the various possible remedies, dismisses—rightly I think—some of those which have been suggested as impracticable or undesirable, and finally selects three as worthy of examination.

These are—

(1) Repeal of Ordinance No. 13 of 1901.
(2) Minting of a Ceylon rupee.
(3) Modification of the Ordinance either (*a*) by limitation of the gold reserve, or (*b*) by giving the Commissioners of Currency the option of issuing or refusing to issue currency notes in exchange for gold.

15. As regards (1), the Commissioners report: "The witnesses have for the most part evinced a decided reluctance to advocate the demonetization of the sovereign as a remedy for the existing scarcity of silver. That this measure would remove the difficulty by causing the banks to resume the importation of silver seems to be universally admitted, and for this reason some are of the opinion that it could not be considered a retrograde step. On the other hand, it appears to be generally felt that the sovereign as a medium of circulation has not yet had a fair trial, and that its demonetization, without first trying one of the other expedients which have been suggested, is to be deprecated;" and the Commissioners add (in paragraph 58) that "there is no doubt there exists a widespread objection to repeal, and we are so far in accordance with the general reasons urged against it that we would only advocate a complete reversion to the *status quo* in the event of expert condemnation of the measures which we have proposed," viz., the amendment of Ordinance No. 13 of 1901 in the sense previously recommended by me.

16. I am very strongly opposed to any such retrograde step as repeal, and my views are unanimously shared by the Members of the Executive Council. I have no doubt that the Commission would have condemned the policy of repeal much more emphatically had the same material for forming an opinion been before them as that which was subsequently in the hands of the Executive Council. I allude to the reports of the various Treasury officers in different parts of the Colony testifying to the increasing use of the sovereign among the people as a medium of circulation and remittance. No doubt it will be some time before the popularity of the sovereign will be general and assured, but the progress which has been made in this respect is very encouraging, and I would earnestly deprecate the uprooting of a young plant which thrives so well. Rather than take so retrograde a step, I would prefer as a temporary—but purely as a temporary—measure that Government should for a time undertake the importation of rupees with all its attendant risks and embarrassments.

17. The Commission gave much attention to (2), the minting of a Ceylon rupee. This is the remedy to which I personally incline—that Ceylon should have its own rupee for internal use, and that the Indian rupee, although not available for the redemption of currency notes, should be allowed to circulate freely. As the Commission remark: "With a complete local currency the Currency Office would be in a position to meet all the demands for local coins, while those who required Indian rupees for purposes of remittance would then apply to those whose business it is to arrange such remittances." Nevertheless, I agree with the Commission in not recommending the adoption of a Ceylon rupee until the question has been fully considered by competent authorities outside the Island, but I suggest that this step be taken as soon as possible.

18. There accordingly remains the third proposed remedy—and this is the one recommended by the Commission—namely, to amend Ordinance No. 13 of 1901 in the following form: "For section 11 of 'The Ceylon Paper Currency Ordinance, 1884,' as amended by section 3 of Ordinance No. 13 of 1901, the following section shall be substituted: 'The Commissioners shall on the demand of any person issue currency notes in exchange for the amount thereof in silver rupees of India. The Commissioners may also issue such notes in exchange for the amount thereof in gold coin which is legal tender in the Colony under any Order of His Majesty the King in Council, but the Commissioners may decline to do so whenever it is inexpedient in their judgment to increase the amount of gold coin held as reserve under this Ordinance.'" If this amendment is effected, the situation, as the Commission remark, "will right itself; the banks will cease to import gold in inconvenient quantities, having no guarantee that it will be accepted by the Treasury, and they will therefore re-commence the importation of rupees in order to meet their financial requirements. On the other hand, gold will still remain legal tender, and will remain a legal coin to hold as reserve against notes."

19. The question is whether you will waive your objections to a course which, no doubt, will conduce to the relief, convenience, and, by the continued circulation of the sovereign, to the eventual prosperity of the Colony. Your objections, I understand, are entirely based on the inconsistency of the proposal with the provisions of the Order in Council constituting gold a legal tender in the Island. I would with all deference point out to you that gold will in fact continue to be a legal tender in the legitimate sense. Government will still be prepared to accept gold in payment of any debt due to it, for all that we desire is the option of exchanging our notes for either gold or silver. Unfortunately, I cannot pretend to any familiarity with this intricate subject, and in dealing with it I can only

* Sessional Paper V. of 1903.

summon common sense to my assistance, and, accordingly (mistaken as, no doubt, I may be), I cannot realize any obligation of Government to give currency notes for either silver or gold when it is physically impossible—as might easily be the case—or even inconvenient to do so. There must be a limit to the issue of notes. If so, and if there is option in certain circumstances, then why should there also not be an option in other circumstances, namely, when the Commissioners of Currency find it impossible or undesirable to issue notes in exchange for gold.? Importers of gold might be ensured against the arbitrary use of this power by a provision requiring it to be exercised after a reasonable interval of warning. But I am of opinion—which is shared by the Commission and by most authorities whom I have consulted—that the Commissioners of Currency will never have to use the power which it is proposed to entrust to them, for as soon as this instrument is placed in their hands the banks will submit to the inevitable and resume the importation of silver. The mere appointment of the Commission, and its probable adoption of so obvious a remedy, have already induced some of the banks to resume the importation of silver, although only to a partial extent.

20. Supposing, however, that the arguments in favour of this recommendation cannot be accepted by experts, I would ask whether so complete and satisfactory a remedy, which is only needed during a period of transition, must be sacrificed to a desire for consistency and symmetry? So high a standard of purity in the matter of currency has not been insisted upon in the case of India, for although, as you have reminded me in your despatch of the 7th November, the Commissioners of Currency in India are bound to issue notes for gold, which is a legal tender, yet the Indian currency system is admittedly defective, for the standard of value adopted is artificial and evanescent, and the rupee is not freely interchangeable with gold. India is in a transitional condition, and, therefore, inconsistencies in her monetary policy are overlooked. I would ask for the same tolerance as regards the comparatively trifling inconsistency which Ceylon desires temporarily to perpetrate in order to attain results of lasting value.

21. Assuming that you will be able to accept this conclusion, I strongly recommend that steps may be taken to constitute half-sovereigns legal tender in this Colony for a payment of any amount at the rate of one half-sovereign for seven and a half rupees. The great objection to the sovereign disclosed by the evidence before the Commission is that it is a coin of too high a value for countries like Ceylon and India, where the vast majority of the inhabitants earn but small wages. The introduction of the half-sovereign would not only go far towards meeting this objection, but would also be of considerable convenience to other members of the community, while, as far as I am aware, the step is free from risk. The proposal forms a natural sequence to the Order in Council of 1901, and its execution would, I am confident, play no small part in popularizing the policy initiated by that Order.

I have, &c.,
WEST RIDGEWAY.

No. 2.

The Right Hon. J. CHAMBERLAIN, M.P., to Governor the Right Hon. Sir J. WEST RIDGEWAY, G.C.M.G., K.C.B., K.C.S.I.

Ceylon.—No. 290. Downing street, August 11, 1903.

SIR,—I HAVE the honour to acknowledge the receipt of your despatch No. 108 of the 31st March, enclosing the report of the Commissioners appointed to inquire into the scarcity of silver in Ceylon, and to suggest a way of meeting the difficulty.

2. I have read with interest the clear and concise report of the Commission, and I have given my careful consideration to the recommendations in your despatch, in which you deal with the whole question.

3. It appears from this report that, as a result of the Order in Council of 26th September, 1901, constituting gold legal tender in the Colony, and of Ordinance No. 13 of 1901 permitting the Currency Commissioners to receive gold as well as silver in exchange for Government notes, the silver reserve in the hands of the Currency Commissioners fell during last year from over 5 million rupees to less than 2 million rupees, while the gold reserve rose to over 6 million rupees.

4. I observe that the interim report of the Commission, dated 21st November last, recommended that the Government should import 20 lacs of rupees to replace sovereigns in the currency reserve, and I learn from your telegram of the 18th ultimo that this course was adopted by the Government, and that the cost of the transaction amounted to Rs. 11,555. The reserve, accordingly, stood on 28th February last, as I gather from your despatch No. 168 of 15th May, at Rs. 3,618,309 in silver and Rs. 2,467,500 in gold; but I learn from your telegram of the 9th May that the silver reserve had then fallen to Rs. 3,000,310 in silver, while the gold reserve had risen to Rs. 3,502,500 in gold, and from your despatch No. 283 of the 7th ultimo that at the end of May the silver reserve was Rs. 2,888,309 in silver and the gold reserve Rs. 3,412,500 in gold. It appears therefore that, unless some change is made in the present practice, the difficulty which arose last year will recur, and it will probably be necessary for the Government again to import silver.

5. The cost of such importation of silver would be reduced if the law were amended in the manner recommended in paragraph 7 of the interim report of the Commission, so as to provide that gold in transit from Ceylon for the purpose of being exchanged for rupees, and rupees in transit to Ceylon, may be regarded, for the purpose of the Paper Currency Ordinance, as a part of the coin reserve held by the Commissioners of Currency, since the cost of freight will then be the only expense involved. Unless it is ultimately decided to repeal Ordinance No. 13 of 1901, I shall be prepared to approve such an amendment of the law, subject to the limitation that the coin reserve actually in the hands of the Commissioners should not be reduced at any time to an amount below one-third of the note issue.

6. I note that you are very strongly opposed to the repeal of the Ordinance, that your views are unanimously endorsed by the Members of the Executive Council, and that the Commission, noting "that there exists a widespread objection to repeal," make, in preference, an alternative recommendation. Under these circumstances, although I am still disposed to think that it would be better to repeal the Order in Council making gold legal tender in Ceylon and the Ordinance No. 13 of 1901, I will not object to these enactments remaining in operation, if, after reading the present despatch, you adhere to your view.

7. Gold currency was introduced as a result of the proposal made in your despatch No. 40 of the 30th January, 1900, that a portion of the coin reserve against the currency notes should be held in gold. I did not at the time see any advantage in the proposal beyond the convenience arising from the smaller space required for storing gold, but, as I informed you in my despatch No. 424 of the 30th November, 1900, I was prepared to agree to it if, at the same time, gold were made legal tender, so that the Currency Commissioners should, if necessary, be able to pay out the gold held as part of the reserve in exchange for notes.

8. The gold sovereign, therefore, came to be made legal tender on grounds of convenience alone, and if experience shows the balance of convenience to be on the other side I do not consider that the policy need be upheld. Its adoption was no doubt partly due to the feeling that it would be well for Ceylon to be placed on the same footing as India, but it must be remembered that the situation in India is different. It is essential for India to hold a reserve of gold in order to maintain the rupee at its gold value, and the making of gold legal tender in India is part of this policy. No such necessity exists in Ceylon, since the gold value of the rupee is inadequately maintained by the action of the Indian Government, and no step which the Ceylon Government has taken, or can take, can have any appreciable effect on the maintenance of the gold standard. I must add that I do not consider that the view suggested in paragraph 20 of your despatch, to the effect that the present Indian currency system is defective and in a transitional condition, is borne out by the facts of the case.

9. The main question, therefore, is whether gold is or is not well suited for general circulation in Ceylon; and—though different opinions are given—paragraphs 17–21 of the Commission's report appear to me to show that it is not well suited for the purpose, and is not likely to be used for the purpose of making remittances to India.

I am informed that in India gold does not circulate to any extent outside a few large towns, and that when the Government made an effort to put it into circulation by cashing postal orders, &c., in gold, the gold found its way back to the Government Treasuries, and that in many cases the holders of gold desiring to change it into silver could only do so through money changers at a discount.

10. In this connection my attention has been drawn to a circular from the Colonial Secretary's Office of the 24th February last, which appears in the *Ceylon Observer* of 5th March, directing that steps should be taken to encourage the use of gold, and I presume that the increased use of gold coins referred to in paragraph 16 of your despatch has partly resulted from that circular. I do not at present see any valid reason why, except as a matter of purely temporary convenience, efforts should be made by the Government to induce the inhabitants of Ceylon to accept Government payments, or part of such payments, in gold. Indeed, there would appear to be some danger that this course might lead to the same result as in India, viz., that the people might ultimately find the coin inconvenient, and only be able to change it at a discount. I should be glad if you would make inquiries to ascertain whether this has to any extent happened in Ceylon. If it has, the effect would simply be to discredit gold—a very undesirable result, seeing that the Ceylon currency is on a gold basis.

11. As regards your suggestion that the half-sovereign should be made legal tender as well as the sovereign, I would explain that this coin was omitted from the Order in Council because there seemed no sufficient reason for throwing upon the British taxpayer the cost of making good the wear and tear of the coinage, and for the reasons given in the enclosed copy of a letter from the Treasury, I am not prepared to approve the proposal that the Order in Council of the 26th September, 1901, should be amended, so as to make the half-sovereign legal tender as well as the sovereign.

12. I admit that the difficulty that has arisen can be at any rate partially obviated by adopting your recommendation that the Currency Commissioners should have the option of issuing or not issuing notes for gold, while being compelled to issue them against rupees. But, as you appreciate, it is not on the face of it sound policy to retain gold as unlimited legal tender, and at the same time to discriminate against it in a Government transaction. In short, as the Commissioners state in paragraph 26 of their report: "If a restriction is placed on the extent to which sovereigns will be received at the Treasury" (or as it should have been expressed, "by the Currency Commissioners"), "gold ceases to be a legal tender in the full sense of the term." The Commissioners also state other objections which appear to me to have weight. I repeat that I do not think there is any necessity for gold to continue to be legal tender, but, if it is so continued, it is in my opinion unwise for the Government to take a step, the natural consequence of which must be to differentiate against the sovereign, by tending to make it difficult for the holders of sovereigns to exchange them for silver except at a discount. In this connection I have to refer you to the observations contained in the enclosed copies of letters from the India Office and Treasury. I am, however, not prepared to refuse my assent to your recommendation, if you still adhere to it, and it may be carried out without further reference to me.

13. I have carefully considered your observations as to the desirability of minting a Ceylon rupee for internal use, still leaving the Indian rupee to circulate freely for all purposes except the redemption of currency notes; but it is a serious matter, in the absence of strong necessity, to change the currency system of a country after it has been in existence for a long period, and I am not prepared to admit that the difficulty in regard to the recent scarcity of silver forms sufficient ground for taking any such step.

14. The currency of India completely satisfied the requirements of the Colony until gold was made legal tender and was received in the Currency Commissioners' reserve, and if it should be decided to continue the existing law, the whole difficulty of the scarcity of silver can be met in the manner described in paragraph 5 above at a comparatively trifling expenditure. The expense involved in introducing a new Ceylon currency would probably be considerably greater, and no net profit could be made out of the coinage, since it would be necessary to use the profits as a gold reserve for maintaining the standard.

15. If a Ceylon rupee were established, I agree with you that it would be necessary that for the purposes of remittance to India the Indian rupee should be allowed to circulate side by side with the Ceylon rupee. It is not merely a question of remittances of large individual amounts to India, but of the aggregate of small sums leaving the Island in native craft and in the waist-cloths of native passengers, which is estimated in paragraph 21 of the report to average a lac of rupees a week. To meet this drain of rupees to India it would apparently be just as necessary as it is at present to take

steps to secure a constant supply of India rupees, so that the difficulty which it is sought to avoid would still exist to some extent. Moreover, apart from the other disadvantages of the double currency, it is doubtful whether the two coins would circulate in Ceylon at par, and there might be great confusion in consequence.

16. You will remember that in 1893 the Government of India expressed a strong objection to Ceylon issuing a coin similar to the Indian rupee (see paragraph 35 *c* of the Report of the Silver Currency Commission, Ceylon Sessional Paper VI., 1894); and though this objection had special reference to a Ceylon rupee on a silver basis, it would no doubt apply, though in a less degree, to a Ceylon rupee on a gold basis. Altogether, I cannot think that it would in any case be advisable to separate the currency of Ceylon from that of India, with which country the Colony is so closely associated; and since it is desired not to revert to silver, but to maintain a gold standard on its present footing, it seems almost out of the question to contemplate any alternative to the use of the standard which has been set up successfully in India after prolonged inquiry, and which is supported by India without expense or trouble to Ceylon.

17. I see no necessity, therefore, for establishing a Ceylon rupee, but I am prepared to approve the proposal made in paragraph 51 of the Commission's report, viz., the raising of the limit of legal tender of the Ceylon subsidiary silver coins from Rs. 5 to Rs. 20, if you concur; and I observe that you have already taken steps to carry out the other suggestion made in that paragraph, viz., that there should be an increase in the coinage of 50-cent pieces, by requesting the Crown Agents to send out 600,000 of such coins. I concur in the view expressed in the enclosed letter from the Treasury that the addition to the subsidiary coinage should be such only as is required by the extension of its legal tender.

I have, &c.,

J. CHAMBERLAIN.

Enclosure No. 1 in No. 2.

The INDIA OFFICE to the COLONIAL OFFICE.

India Office, Whitehall, London, S.W.,
F 4,891. July 24, 1903.

SIR,—I AM directed to acknowledge the receipt of Mr. Lucas's letter of the 8th instant (No. 14,565) asking whether the Secretary of State for India in Council has any objection to offer to the proposal that the Ordinance relating to Paper Currency in Ceylon should be modified so as to enable the Commissioners of Currency to decline to issue notes in exchange for gold.

In reply, I am to say that the question is not one in which India is directly interested. It appears, however, to Lord George Hamilton that, since gold is the standard of value and is legal tender in Ceylon, while the rupee is the principal medium of circulation, and since the Government of Ceylon does not (as is done in India) supply rupees to the public in direct exchange for gold, the proposed measure would be somewhat anomalous, and might cause inconvenience.

The Governor of Ceylon, as appears from the 10th paragraph of his despatch of the 31st March, 1903, does not regard as very serious the question of the expense which, if no change is made, would fall on the revenues of the Colony in connection with the importation of rupees from India for the encashment of notes; but His Excellency makes his present recommendation because he regards the existing arrangements as open to objections on two grounds, viz.:—

(1) That they are wrong in principle.
(2) That they impose on the Administration a responsibility which is heavy and might become dangerous.

With regard to the question of principle, Lord George Hamilton does not think that it is beyond the province of the Colonial Government to take measures, even at some expense, for providing for the requirements of the Colony in respect of rupee currency. His Lordship is of opinion that the action taken by the Government in November, 1902, in importing 20 lacs of rupees was right in principle, and it appears to have been beneficial in its results.

With reference to the second of the objections mentioned above, it is not clear (seeing that the Government of India under the Notifications which were forwarded in the letter from this office of 29th August, 1902, issue rupees in exchange for gold) how the Ceylon Government would be exposed to any responsibility such as the Governor apprehends. It is not stated that there has hitherto been difficulty in obtaining rupees from India in exchange for gold, and Lord George Hamilton feels sure that the Government of India will at all times do all that is in its power to meet the convenience of the Ceylon Government in this respect.

If at any time the Government of Ceylon found that gold was being tendered to them to an inconvenient amount, they might despatch gold to Bombay or Calcutta, and telegraph to the Government of India asking that rupees might be sent to Ceylon in anticipation of its arrival. In this way the risk of temporary inconvenience would be avoided.

I have, &c.,

A. GODLEY.

Enclosure No. 2 in No. 2.

The TREASURY to the COLONIAL OFFICE.

12,107/1903. Treasury Chambers, 31st July, 1903.

SIR,—I HAVE laid before the Lords Commissioners of His Majesty's Treasury Mr. Lucas's letter of the 8th instant (14,565/1903), with its enclosures, on the subject of the scarcity of rupees in Ceylon and the measures proposed for meeting the difficulty.

In reply, I am directed to state for the information of Mr. Secretary Chamberlain that, regard being had to the intimate commercial connection between Ceylon and India, my Lords are of opinion that it is a matter of the first importance that the rupee of the Government of India should be retained as the principal circulating medium of the Colony. They therefore regard with disfavour the suggestions—(1) that a local rupee should be coined for Ceylon; (2) that material additions should be made to the volume of the subsidiary currency; (3) that further attempts should be made to increase

the popularity of gold by making the half-sovereign legal tender, since any of these measures would tend to expel Indian rupees from circulation, and would not, in their Lordships' opinion, at any rate until the Indian rupee had entirely disappeared from circulation, contribute to effect the permanent removal of the difficulties now experienced.

My Lords note that local opinion is not at present in favour of the demonetization of the sovereign, and they agree that there are objections to the reversal of a policy so soon after its inception.

On the other hand, the proposal to empower the Currency Commissioners to refuse to issue notes in exchange for gold, besides being, as Mr. Chamberlain points out, difficult to reconcile with the provision making gold unlimited legal tender, is likely to prove at best a partial remedy, since so long as the sovereign remains legal tender and can be obtained more cheaply than the rupee, it may continue to embarrass the circulation, whether notes can be obtained for it or not.

The measure may, however, be useful as a temporary palliative, and it will prevent the machinery of the Currency Commission from being used as the means of exchanging gold for rupees. By its adoption time will be gained to acquire further experience of the desirability of retaining the sovereign as legal tender.

Regard being had to these considerations, I am to say that my Lords concur generally in the terms of the draft despatch which Mr. Chamberlain proposes to address to the Governor of Ceylon, subject to the alteration of paragraph 11 in the sense of declining to assent to the proposal that the half-sovereign should be made legal tender, and to a modification of the last paragraph to the effect that the addition to the subsidiary currency should be such only as is required by the extension of its legal tender.

Even if it could be shown that it was to the interest of Ceylon to have a coin of the denomination of the half-sovereign, my Lords would feel great hesitation in permitting the introduction of this coin, the maintenance of which imposes a considerable charge upon the British taxpayer, in a Colony which makes no indirect contribution to the upkeep of the gold currency by using the subsidiary coinage of the United Kingdom. But not only is the place of the half-sovereign already adequately supplied by currency notes of the smaller denominations, but its introduction would not, as indicated above, in the opinion of this Board, have any permanent influence to remove existing difficulties except by producing on the circulating medium of the Island an effect which is not to be desired in the interests of Ceylon itself.

I have, &c.,
E. W. HAMILTON.

No. 3.

Governor the Right Hon. Sir J. WEST RIDGEWAY, G.C.M.G., K.C.B., K.C.S.I., to the SECRETARY OF STATE FOR THE COLONIES.

The Queen's House, Colombo,
Ceylon, October 26, 1903.

SIR,—I HAVE the honour to acknowledge receipt of Mr. Chamberlain's despatch No. 290 of the 11th August, 1903, in reply to my despatch of the 31st March last, forwarding the report of the Commissioners appointed to inquire into the scarcity of silver.

2. In view of the contents of that despatch, I deemed it advisable again to appoint the Currency Commission in order that they might reconsider the whole question in the light of Mr. Chamberlain's representations, and in the light of the latest available information as to the circulation of gold in Ceylon. The terms of reference to the Commission were as follows: To consider the despatch from the Secretary of State and advise Government which of the alternatives referred to therein it should adopt, viz., the repeal of Ordinance No. 13 of 1901 and of the Order in Council of the 26th September, 1901, or the amendment of Ordinance No. 13 of 1901, as proposed by the Commission in their report dated 20th January, 1903.

3. I now enclose the supplementary report of the re-appointed Commission. Considerable doubt is expressed in Mr. Chamberlain's despatch as to whether the effect of the gold legislation of 1901 has proved, or is likely to prove, of any practical benefit to the Colony, and the Commission therefore devote a large part of their report to an examination of the relative advantages and disadvantages of retaining the sovereign as legal tender in this Colony. The point of view from which they approach this examination is thus described in paragraph 7 of their report: "In attempting to decide the question whether it is advisable or unadvisable at the present juncture to demonetize the sovereign in Ceylon we have kept in view the following question, which, we think, states the main issue: Do the advantages of retaining the sovereign as legal tender at the standard rate of exchange and as a legitimate portion of the coin reserve against notes sufficiently outweigh the disadvantages of such retention to make it worth while to give the gold legislation of 1901 a further trial? For although we recognize the inconvenience arising from the present unsettled state of currency affairs in this Island, we think it only right to point out that in such matters time is an essential factor in producing equilibrium, and the normal results of the recent extension of our currency system have probably by no means yet been reached."

4. I need not here recapitulate the arguments stated by the Commission for and against gold as a currency, but I may observe that the advantages stated in paragraph 11 are by no means insignificant; and in my opinion they easily outweigh the objections summarized in paragraph 8. The advantages are generally admitted, but the disadvantages, with the possible exception of the first, cannot be considered serious; they certainly are not inevitable. There would indeed be no pronounced objection to the sovereign were it not that "the unlimited receipt of gold by the Commissioners of Currency," to quote from paragraph 9 of the report, "encourages the importation of that coin rather than silver."

5. The practical inconvenience, *i.e.*, a scarcity of silver, which results from this phase of the gold legislation has been fully explained in previous despatches, and the experience of the past year has not altered the general conviction that either Government must undertake to import rupees, or that the gold Ordinance must be repealed or modified.

6. Both the Commission and the Executive Council are agreed in deprecating the assumption by Government of the indefinite liability which the first solution would involve, and I am in entire accordance with this position, for I cannot see upon what grounds it can be maintained either that

Government should be compelled to issue its notes for gold and then redeem them in silver, or that Government should undertake the responsibility of providing sufficient rupees for purposes of trade with India. I must repeat that such a responsibility, should a crisis occur, might entail still more dangerous and embarrassing responsibilities. An indication of the probable consequences is given in paragraph 3 of the Commission's report, from which you will see that the Government of Ceylon might find itself in the position of defraying the cost of moving rupees from the north to the south of India.

7. The only alternatives, therefore, which are regarded as practicable are the repeal or modification of Ordinance No. 13 of 1901. The Commission have duly considered the arguments urged by Mr. Chamberlain against the modification proposed in their previous report, and their conclusion is that the "objections to the course.....are not of sufficient force to condemn it without actual trial if on other grounds it is deemed inexpedient, or at least premature, to demonetize the sovereign." They again emphasize the strong feeling against demonetization, and they therefore advise "that the effect of an amendment of Ordinance No. 13 of 1901 in the direction previously indicated should first be tried." In this advice I unreservedly concur.

8. The Commission's specific recommendation is "that the Commissioners (of Currency) should, as at present, issue notes for gold on the demand of any person, but only for so long as the amount of gold in the reserve does not exceed a certain fixed amount, and that as soon as that limit has been reached they should cease to issue notes for gold;" and for reasons given in paragraph 27 they fix the limit at £200,000.

9. It will be noticed that the Commission have travelled somewhat beyond their province in proposing an amendment of the Ordinance different from that contemplated by Mr. Chamberlain in paragraph 12 of his despatch. The amendment now suggested is not indeed altogether new: it was put forward in paragraph 26 of the previous report, but it was ultimately rejected for the reasons given in the 57th paragraph, which reads as follows: "It has been suggested that, even if the (proposed) amendment is carried out, it would still be desirable to place a limit on the amount of gold which the Commissioners should be empowered to hold. While, however, we consider any inflation of the gold reserve to the detriment of the silver reserve should be most carefully guarded against by Government, we are unwilling to recommend the fixing of the amount of that reserve by legislative enactment, nor do we regard such a step as necessary if the course we have recommended is pursued."

10. In my judgment and that of the Executive Council the re-appointed Commission have not advanced sufficient reason for departing from the above sound conclusion. To impose an arbitrary limit by statute on the amount of the gold reserve, which would thus be absolutely inelastic, appears to me to be altogether unnecessary, and I propose, therefore, with the concurrence of the Executive Council, to adopt the previous recommendation of the Commission and to amend Ordinance No. 13 of 1901 by giving the Commissioners of Currency the option of issuing or refusing to issue notes for gold whenever it is inexpedient in their judgment to increase the amount of gold in the reserve. Nevertheless, I agree generally with the opinion of the Commission that under present circumstances £200,000 is the maximum amount which should be held as reserve in gold, and practical effect will be given to their recommendation by the issue of a notification by the Commissioners of Currency that they will accept sovereigns only so long as the amount of gold in the reserve does not exceed £200,000. At the same time an undertaking will be given not to make any alteration in this arrangement without giving three months' notice. A copy of the notification which it is proposed to issue is annexed.

11. In paragraph 11 of Mr. Chamberlain's despatch of the 11th August last the decision of the matter is left in my hands. I have therefore caused an Ordinance giving effect to the above proposal to be introduced into the Legislative Council. A copy of the draft Ordinance is annexed. [See page 28.]

12. I may add that, in view of the fact that the silver reserve has now fallen to the low figure of Rs. 1,634,309·90, I have issued orders for the immediate importation of 1,000,000 rupees in exchange for sovereigns. It may be necessary to make a further exchange in order to give the new system a fair start, but in a few months the banks will probably have resumed their regular importations of silver.

13. It only remains for me to notice Mr. Chamberlain's apprehension (expressed in paragraph 10 of his despatch) lest the attempt to encourage the circulation of gold in this Colony should cause inconvenience to any extent in view of the fact that it may be impossible to change sovereigns except at a discount. I have, as desired, made inquiries on this point, and it is no doubt true that when gold was first constituted legal tender in Ceylon the opportunity was frequently taken by professional money changers to levy a commission for changing sovereigns. More recent reports from my provincial officers, however, contain no reference to such a charge, while some expressly state that it is no longer made. In Colombo there is certainly no difficulty in cashing sovereigns. Even in the country districts there is no reason to believe that the charge is noticeably greater than that regularly demanded for cashing currency notes, and I do not believe that either the notes or the gold are discredited to any appreciable extent by a custom which is a natural and accepted incident of exchange in an Oriental country.

14. In conclusion, I have to express the hope that you will approve the action I have taken in this matter. If the system of limiting the gold reserve fails to effect its object of inducing the banks to renew their imports of silver, or if the inability in certain circumstances to obtain notes for gold is found to cause serious and unavoidable inconvenience, the demonetization of the sovereign will apparently be the only remedy. I do not myself think, however, that either of the events I have mentioned is likely to happen; on the contrary, I feel confident that the remedy now proposed will remove the only objection to a currency destined, I believe, to prove of material benefit to the Colony, and that the temporary difficulties of the past two years will now speedily disappear.

I have, &c.,

WEST RIDGEWAY.

Notification referred to.

It is hereby notified that the Commissioners of Currency, in exercise of the powers given them by the 2nd section of Ordinance No. —— of 1903, will receive sovereigns in exchange for currency notes only so long as the gold reserve does not exceed £200,000.

Before any alteration is made in the above arrangement three months' notice will be given.

Enclosure No. 1 in No. 3.

The Hon. the COLONIAL SECRETARY to the Hon. Mr. A. G. LASCELLES, K.C., Chairman, Currency Commission.

Colonial Secretary's Office,
Colombo, September 16, 1903.

SIR,—I AM directed to forward to you the accompanying printed copy of a despatch dated 31st March, 1903, from His Excellency the Governor to the Secretary of State for the Colonies, forwarding the reports of the Commission appointed in November, 1902, to inquire into the scarcity of silver in the Colony, together with a copy of the despatch received from the Secretary of State in reply thereto dated 11th August, 1903.

2. I am to inform you that in order to expedite a satisfactory settlement of the whole question, His Excellency the Governor has been pleased to re-appoint the Currency Commission under your presidency to consider the despatch from the Secretary of State, and to advise as to which of the two alternatives referred to therein should be adopted, viz., whether the Ordinance No. 13 of 1901 and the Order in Council of the 26th September, 1901, should be repealed, or whether the Ordinance No. 13 of 1901 should be amended as proposed in the report of the Commission dated 20th January, 1903. His Excellency also desires the Commission to advise as to any further steps which should be taken to ensure maintaining an adequate supply of silver in the Island.

3. I am to state that in view of the absence from the Island of Messrs. Philip Freudenberg and D. R. Marshall, the Hon. Mr. W. H. Figg and Mr. G. H. Lowe have been appointed members of the Commission, which will thus consist of the Hon. Mr. Figg, the Hon. Mr. E. Rosling, Messrs. F. W. Bois, W. T. Highton, G. H. Lowe, J. Spicer, and R. A. Brohier. Mr. A. R. Slater will again act as Secretary to the Commission.

4. His Excellency desires me to observe that neither the Commission appointed last year nor the Secretary of State for the Colonies would seem to have noticed the appreciably growing circulation of gold in the Colony. Correspondence on the subject will be laid before the Commission, and from these papers it will be observed that the information at the disposal of Government proves that the demand for gold has been largely spontaneous, and that the fear expressed by the Secretary of State for the Colonies, that the people may find gold inconvenient and may be only able to change it at a discount, has not been realized. I am, however, to request that the Commission will throw further light on this point, if possible.

5. His Excellency is inclined to think that the advantages which gold offers as a means of relieving the pressure which so often follows the drain of rupees from Ceylon to India have not been sufficiently appreciated, and I am to suggest that the Commission should reconsider this point.

6. I am to inform you that the Governor is not prepared to let the existing state of things continue, nor is he prepared to admit that Government should import rupees when there is a scarcity owing to a drain of silver to India. As pointed out to the Secretary of State for the Colonies in paragraph 10 of the despatch addressed to him, His Excellency considers that it is very undesirable that the Government should make itself responsible for the sufficiency of the supply of rupees in the Island for the purposes of trade with India. Such a responsibility might entail very embarrassing and dangerous consequences.

7. For purposes of reference, I forward herewith a copy of Sessional Paper No. V. of 1903 containing the reports of the Commission dated 21st November, 1902, and 20th January, 1903, and also a copy of Government Circular No. 32 of the 24th February, 1903, to which reference is made in the despatch from the Secretary of State for the Colonies.

8. The formal Commission under the hand of the Governor and the Public Seal of the Island is also herewith forwarded.

9. I am to add that the Governor considers that it is full time in the interests of trade and commerce that this important question should be settled, and that therefore His Excellency will be grateful if the Commission will give the matter early and unbroken attention.

I am, &c.,
A. R. SLATER,
for Colonial Secretary.

COMMISSION.

IN the Name of His Majesty EDWARD THE SEVENTH, of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas, King, Defender of the Faith.

By His Excellency the Right Honourable Sir J. WEST RIDGEWAY, Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, Knight Commander of the Most Honourable Order of the Bath, Knight Commander of the Most Exalted Order of the Star of India, Governor and Commander-in-Chief in and over the Island of Ceylon, with the Dependencies thereof.

WEST RIDGEWAY.

To the Hon. Mr. A. G. LASCELLES, Attorney-General; the Hon. Mr. W. H. FIGG; the Hon. Mr. E. ROSLING; F. W. BOIS, Esq.; W. T. HIGHTON, Esq.; G. H. LOWE, Esq.; J. SPICER, Esq.; and R. A. BROHIER, Esq.

GREETING.

WHEREAS We deem it expedient that a Commission should issue to consider despatch No. 290 of 11th August, 1903, from the Secretary of State, and advise the Government as to which of the two alternatives referred to therein it should adopt, viz., the repeal of Ordinance No. 13 of 1901 and of the Order in Council of 26th September, 1901, or the amendment of Ordinance No. 13 of 1901

as proposed by the Commission appointed on 5th November, 1902, in their report dated 20th January, 1903, and as to any further steps to be taken to ensure maintaining an adequate supply of silver in the Island in view of the considerations stated in the despatch from the Secretary of State:

Now know Ye that We, the said Governor, reposing great trust and confidence in your prudence, ability, and fidelity, have, with the advice of Our Executive Council, in pursuance of the powers in Us vested by the Ordinance No. 9 of 1872, nominated, constituted, and appointed, and by these presents do nominate, constitute, and appoint you, the Hon. Mr. A. G. LASCELLES, Attorney-General; the Hon. Mr. W. H. FIGG; the Hon. Mr. E. ROSLING; F. W. BOIS, Esq.; W. T. HIGHTON, Esq.; G. H. LOWE, Esq.; J. SPICER, Esq.; and R. A. BROHIER, Esq., to be Our Commissioners for the purposes aforesaid, with authority to exercise all the powers which Commissioners appointed under the said Ordinance may lawfully use and exercise.

And We do hereby nominate, constitute, and appoint you, the Hon. Mr. A. G. LASCELLES, Attorney-General, to be the Chairman of the said Commission.

And We do further hereby authorize and empower you, Our said Commissioners, to make all necessary inquiries into the said matter, and to report to Us under your hands within one month from this date, or so much earlier as may be possible, upon the matter referred to you as aforesaid.

Given at Nuwara Eliya, under the Seal of this Island, this Sixteenth day of September, in the year of our Lord One thousand Nine hundred and Three.

By His Excellency's command,

EVERARD IM THURN,
Colonial Secretary.

Enclosure No. 2 in No. 3.

REPORT of the Commissioners appointed to consider and advise upon the Despatch from the Secretary of State dated August 11, 1903, dealing with the report of the Currency Commission (1902) dated January 20, 1903.

1. IN accordance with the instructions contained in the Colonial Secretary's letter dated September 16, 1903, we have duly considered Mr. Chamberlain's despatch dealing with our report of January last. We have also perused the papers which have been laid before us on the subject of the circulation of gold in Ceylon during the past year, and we now proceed to report the conclusions we have reached on the questions referred to us.

2. Before, however, we discuss the advantages and disadvantages of the alternatives referred to in the Secretary of State's despatch we desire to express our agreement with the Governor's view that it is undesirable that Government should make itself responsible for the sufficiency of rupees for the purpose of trade with India. On this point we see no reason to modify the opinion expressed in paragraph 33 of our report dated 20th January, 1903. "We are not prepared," we wrote, "to recommend that the obligation of importing rupees should rest upon Government. Such an obligation would entail a large and recurring expenditure which would fall on the general community, but which would confer a benefit which might be confined to that section who require to make cash remittances to India."

3. At the time that these words were written an experiment was being made by the Government in this very matter of importing rupees. About two million rupees were imported from Calcutta in exchange for their equivalent number of sovereigns. We have been supplied with particulars of the cost of the exchange, which show it to have been not quite $\frac{5}{8}$ per cent. It may be true that the cost of this isolated transaction was inconsiderable, but it must be borne in mind that if Government admits its liability to meet all demands for rupees, the necessity of importing will arise not occasionally but regularly. As illustrating the consequences which would not improbably ensue, we may point out that not only would Government be undertaking to finance those native traders and others who require rupees to remit or take to India, a burden which, we repeat, should not in our opinion be imposed upon the general community, but the Government of Ceylon might actually find itself in the position of defraying the cost of moving rupees from the north to the south of India; for it is admitted that demands might be made by the banks in Colombo for rupees to be sent to the branches in Tuticorin and elsewhere.

4. But, while we concur with the Governor in the principle that Government should remain free from any obligation to import rupees, we also agree with His Excellency that a continuance of the existing state of things is undesirable, and that a change, either final or tentative in character, is essential in the interests of trade and commerce. We have not thought it necessary to take any further evidence, but we understand that the scarcity of rupees still continues. The Secretary of State draws attention in paragraph 4 of his despatch to the fact that, in spite of the import of Rs. 1,950,000 in February last by Government, the silver reserve had by the end of May sunk to Rs. 2,888,309, and we may add that by the date on which the Commission was re-appointed (16th September, 1903) it had dropped still further to Rs. 2,111,309, of which Rs. 91,000 was represented by subsidiary coins. We feel it our duty to record our opinion that this reserve of rupees, amounting to less than one-seventh of the note circulation, is quite inadequate, and we consider that steps should be taken without delay to augment it. It will be shown that our final recommendation, besides forming, as we hope, a solution of the difficulty as regards the future, also provides for the early redress of the present unequal balances in the gold and silver reserves.

5. The silver reserve has now been abnormally depleted for over eighteen months, and from the Customs returns for the present year it will be seen that the banks are not resuming to any noticeable extent their former practice of importing rupees, while, on the other hand, the influx

of gold continues steadily to increase. If, then, the obligation of importing rupees is not to be placed upon Government, it is clear that such steps must be taken as will check the import of gold to an extent sufficient to bring about a renewal of the import of silver. We discussed the alternative courses at length in our previous report, and we arrived at the conclusion that, while the repeal of the Order in Council constituting gold legal tender was an admittedly simple and certain solution of the difficulty, it was possible to achieve the desired result by a slight modification of Ordinance No. 13 of 1901, which would avoid the retrogressive appearance of repeal. We note that the Secretary of State is disposed to prefer the demonetization of the sovereign, but that he admits the difficulty could at any rate be partially obviated by adopting our recommendation that the Currency Commissioners should have the option of issuing or not issuing notes for gold. We note also that the Secretary of State is not prepared to refuse his assent to this proposal, and repeal cannot therefore be considered *necessary* in order to relieve the present scarcity of silver. In short, the alternatives of total repeal or amendment of the Ordinance still remain open. We have reconsidered the question in the light of Mr. Chamberlain's remarks on the problematic advantages of gold circulation in the Colony and of the latest available information on the subject, and in the following paragraphs we shall endeavour to set forth afresh the arguments for and against repeal.

7. In attempting to decide the question whether it is advisable or unadvisable at the present juncture to demonetize the sovereign in Ceylon we have kept in view the following question, which, we think, states the main issue : Do the advantages of retaining the sovereign as legal tender at the standard rate of exchange and as a legitimate portion of the coin reserve against notes sufficiently outweigh the disadvantages of such retention to make it worth while to give the gold legislation of 1901 a further trial? For, although we recognize the inconvenience arising from the present unsettled state of currency affairs in this Island, we think it only right to point out that in such matters time is an essential factor in producing equilibrium, and the normal results of the recent extension of our currency system have probably by no means yet been reached.

8. In the first place, then, what are the objections to retaining the sovereign as legal tender and as a portion of the reserve? Waiving such minor disadvantages as the ease with which it may be lost, the liability of confusion with the 50-cent piece, and the practical impossibility of tracing it if stolen, the most important objections seem to be as follows :—

(*a*) The circulation of the sovereign must exercise an adverse effect on the currency note circulation, and thus diminish the profit made on that circulation. It is difficult to frame any estimate of this effect, but the majority of the Commission are agreed that sovereigns are in general substituted for notes rather than rupees. The minority, however, desire to place on record their opinion that the note circulation is affected to an inappreciable extent by the circulation of gold, their contention being that most of the notes in circulation are held by the banks and large dealers, for whose purposes notes must always remain the most convenient form of reserve.

(*b*) The possibility of the sovereign being "sweated" is in our opinion a danger to be reckoned with. Any loss from such depreciated coins must fall either on Government or, if Government refuse to receive them, on an innocent holder.

(*c*) Thirdly, no currency can be regarded as perfectly satisfactory which does not suit the requirements of all members of the community, and it must be admitted that in Ceylon the sovereign does not fulfil this condition. While no embarrassment from the use of the sovereign is likely to be felt by the well-to-do or even by the general body of residents in the larger towns, it seems indisputable that inconvenience, if not actual hardship, may conceivably be caused to the poor and those living in the country districts if the circulation of gold is in any way forced. It is satisfactory to note, from the extracts from the reports of the Government Agents which have been placed before us, that there appears to be a tendency to discontinue the practice of charging a heavy commission on changing a sovereign, but we would deprecate the application of any artificial stimulus to promote the circulation of gold. In our opinion such circulation can only be beneficial in so far as it is natural.

9. It will be seen that the disadvantages of gold which we have recorded above apply only to its circulation ; we have been unable to ascertain any objection to the retention of gold as a portion of the coin reserve, except in so far as the unlimited receipt of gold by the Commissioners of Currency encourages the importation of that coin rather than silver.

10. We turn now to an examination of the advantages of retaining gold as a legal tender in this Colony and as a portion of the coin reserve. Before, however, we enumerate those advantages we would invite a reference to paragraph 9 of Mr. Chamberlain's despatch, where it is stated that "the main question is whether gold is or is not well suited for general circulation in Ceylon." While we agree in assigning to this question a very high degree of importance, we desire to emphasize the fact that, even admitting the possibility of the sovereign never attaining more than a limited circulation in the Island, there are nevertheless distinct advantages in its remaining a legal tender at the standard rate. If these advantages outweigh the objections we have adduced, and if they can be retained without any permanent dislocation of the currency system, we do not think the comparative unsuitability of the coin for certain classes in the Island should be considered sufficient cause for its demonetization.

11. Putting on one side certain minor advantages of gold, such as its cleanliness, comparative indestructibility, and convenient size,—these may well be balanced against the minor disadvantages alluded to in paragraph 8,—we may state the case in favour of the sovereign on three main grounds :—

(*a*) It is legal tender in India, and in the interests of our very intimate and important commercial relations with that country, it is highly desirable that the currency systems of India and Ceylon should be as far as possible identical.

(*b*) Not only is the sovereign legal tender in India, but it may appropriately be termed the common denominator of the world's currency, and its use as a circulating medium is constantly extending. Two years ago, by its gold legislation, Ceylon

took its place among those countries where gold is current at a standard rate, and while we have no desire to attach undue importance to what has been called the sentimental argument in favour of the sovereign, we consider that its demonetization after so short a trial would almost certainly be liable to misconstruction. The local circumstances of the case would not be appreciated, and it would be impossible to avoid the appearance and the reproach of retrogression.

In this connection we may observe that the advantage of having the sovereign legal tender at a fixed rate is of no small importance to the passengers who pass through Ceylon in ever-increasing numbers. It would be difficult to over-estimate the impetus which they give to trade, and any measure which facilitates their transactions is undoubtedly in the interests of the Colony no less than of themselves. The knowledge and experience that a sovereign will purchase goods or services at a fixed rate is, we believe, a distinct convenience to the traveller, on whom the favourable impression thus produced is not lost.

(*c*) Thirdly, it may be urged that there is a certain security in the Colony holding a portion of its reserve in a coin with an intrinsic value like the sovereign. It must be remembered that the Indian Government, while freely issuing rupees for sovereigns, undertake no obligation to issue sovereigns for rupees. Our gold reserve, therefore, may be said to be always available for the purchase of rupees when necessary, but a silver reserve is not similarly available for the purchase of gold. We are not prepared to frame any estimate of the advantage accruing from a gold reserve, but we are of opinion that in a crisis it might be considerable.

12. We have now recited the principal arguments for and against the retention of the sovereign as legal tender as they present themselves to us, but before expressing our conclusion as to the side on which the balance of advantage lies we will briefly notice the point to which our attention has been specially drawn in paragraph 5 of the Colonial Secretary's letter of the 16th September, 1903, viz., "the degree to which gold relieves the pressure which follows a drain of rupees to India." The question turns to some extent on whether the pressure referred to is a scarcity of rupees for internal circulation or a scarcity for purposes of remittance.

13. Considering the question first from the point of view of internal circulation, it is contended on the one hand that, inasmuch as a sovereign can only take the place of fifteen rupees, any scarcity of rupees can and will be equally met by a more extended use of currency notes. Objection is taken to this reasoning on the ground that the number of notes which can be absorbed is limited, while this is not the case with sovereigns.

14. We may here notice the interesting report of the Colonial Treasurer dated 9th September, 1903 (see Appendix D), in which Mr. Cameron estimates that over £200,000 in sovereigns are in circulation in the Island or have been sent out of the Island by private remittance. We regret that we have not been able to discover any means of verifying this figure, but we readily admit its significance if the estimate is correct.

15. On the whole, we concur in thinking that gold does relieve to some extent the internal pressure caused by scarcity of rupees, but two of our number consider the relief is infinitesimal.

16. Turning to the question whether gold relieves the pressure caused by scarcity of rupees for remittance purposes, the general concensus of opinion expressed by the witnesses whom we examined last November and December was that for the purpose for which coin is shipped to India the sovereign is unsuitable on account of its high unit of value. We are inclined, however, to think that the advantage which gold has over silver by reason of its smaller cost of transport probably neutralizes to some extent the disadvantage of the cost of exchange, and in any case it will, we think, be admitted that some of the remittances to the opposite coast which are made in rupees could with equal advantage be made in sovereigns. To this it may be objected that the money market of Ceylon will be inconvenienced no less by an efflux of sovereigns than by an efflux of rupees, and we would take this opportunity of pointing out that the mere fact of Ceylon possessing a gold currency cannot affect the amount of money which is remitted to or obtained from India, such amount being governed almost wholly by the balance of trade. In other words, the tightness of money in Ceylon cannot be relieved by Government holding a portion of the reserve in gold instead of silver.

17. We have now reviewed the main advantages and disadvantages of retaining the sovereign as legal tender and as a portion of the reserve, and we are therefore in a position to revert to the issue stated in paragraph 7, namely, whether the advantages outweigh the objections to an extent sufficient to make it worth while to give the gold legislation a further trial. The question involves, however, one further consideration on which we have not yet touched, *i.e.*, as to the conditions under which a further trial is proposed. If the existing conditions are to continue, we would for the reasons given in paragraph 4 answer the question with an emphatic negative. But the conditions which we proposed in January last provided, in our opinion, for the removal of the main difficulty caused by the gold legislation, and we will now briefly examine the objections that have been raised to our proposal.

18. The Secretary of State considers that "it is not sound policy to retain gold as unlimited legal tender and at the same time to discriminate against it in a Government transaction." We admit the anomaly, but at the same time we venture to point out that a similar anomaly already exists in the fact that the Commissioners of Currency discriminate against rupees in redeeming their notes. The right to such discrimination was given to them by Ordinance No. 13 of 1901, and it must, we think, be generally admitted that it is justified by the present local circumstances. But the discrimination involved in our proposal is not only far less important in itself, but by relieving the scarcity of rupees will probably entirely obviate the necessity for differentiating against these coins in the redemption of notes.

19. Mr. Chamberlain's objection is, we believe, the main one, but it has been represented to us that inconvenience is likely to arise if notes cannot freely be obtained for gold from the Currency Commissioners. It is contended that a person may be compelled to receive a large sum in gold in

payment of a debt, and then be unable to deposit the gold, inasmuch as neither the Commissioners of Currency nor the banks will receive it. The majority of us are not, however, disposed to consider the objection as a very serious one, for it seems improbable that there would be any permanent difficulty in utilizing the gold in payment of other debts.

20. For the reasons stated in the two foregoing paragraphs we maintain that the objections to the course proposed by us last January are not of sufficient force to condemn it without actual trial, if on other grounds it is deemed inexpedient, or at least premature, to demonetize the sovereign.

21. We have given very careful consideration to the relative advantages and disadvantages of retaining the sovereign as legal tender, and we consider that they are equally balanced, but on the broad question whether it is desirable to repeal the Order in Council and the Ordinance No. 13 of 1901 we desire to emphasize the general feeling expressed in paragaph 23 of our previous report, that the demonetization of the sovereign without first trying one of the expedients which have been suggested is to be deprecated. That feeling and our general agreement therewith is certainly no less strong to-day than it was ten months ago, and accordingly, although some of our number still consider that repeal will be found to be the only satisfactory solution of the difficulty, we concur in advising that the effect of an amendment of Ordinance No. 13 of 1901 in the direction previously indicated should first be tried.

22. In making this recommendation, however, we do not adhere exactly to our former proposal. In paragraph 57 of our report we wrote : "It has been suggested that, even if the above amendment [*i.e.*, to give the Commissioners of Currency the option of issuing or refusing to issue notes for gold] is carried out, it would be desirable to place a limit on the amount of gold which the Commissioners should be empowered to hold. While, however, we consider that any inflation of the gold reserve to the detriment of the silver reserve should be most carefully guarded against by Government, we are unwilling to recommend the fixing of the amount of that reserve by legislative enactment. Nor do we regard such a step as necessary if the course we have recommended is approved."

23. On further consideration we are disposed to take a somewhat stricter view as regards this point. A currency system to be satisfactory should be as far as possible automatic in its operation, and any measure whereby those who control the currency are given an option in certain circumstances is inconsistent with the condition we have laid down. A regrettable, but in our view necessary, option is already allowed the Commissioners in the matter of redeeming their notes, but we desire to avoid, if possible, any extension of the principle. We notice also that the Governor in the 19th paragraph of his despatch of the 31st March contemplates the possibility of an arbitrary use being made of the power which we suggested should be entrusted to the Commissioners of Currency, and we are agreed, therefore, in recommending that the Commissioners should, as at present, issue notes in exchange for gold on the demand of any person, but only for so long as the amount of gold in the reserve does not exceed a certain fixed amount, and that as soon as that limit has been reached they should cease to issue notes for gold.

24. The necessary amendment of the Ceylon Paper Currency Ordinance would run as follows : "For section 11 of 'The Ceylon Paper Currency Ordinance, 1884,' as amended by section 3 of Ordinance No. 13 of 1901, the following section shall be substituted :—

> "The Commissioners shall, on the demand of any person, issue currency notes in exchange for the amount thereof in silver rupees of India.
>
> "The Commissioners shall also, on the demand of any person, issue such notes in exchange for the amount thereof in gold coin which is legal tender in Ceylon under any Order of His Majesty the King in Council whenever the amount of gold coin held as reserve does not exceed the sum of £200,000, but not otherwise."

25. We would here point out that the existing gold reserve is far in excess of the limit we have proposed, and we understand, moreover, that the amount is regularly increasing. We desire, therefore, to emphasize the fact that if our recommendation is to be effective it is absolutely necessary that concurrently with, or if possible in anticipation of, the passing of such an amendment of the Ordinance as the one we have suggested, steps should be taken to reduce the amount of gold in the reserve to the proposed limit of £200,000, in order that the silver reserve may be placed on a more satisfactory basis as early as possible.

26. The practical result of the proposed alteration in the law will, we believe, be the same as that anticipated from the one previously recommended. It will be impracticable to continue large importations of gold when it is certain that beyond a limited amount it will not be received by the Currency Commissioners. The importations of rupees will therefore be resumed to meet the financial requirements of the Colony. On the other hand, the course now proposed absolutely prevents the undue accumulation of gold, of which there would still be a danger if option were reserved to the Commissioners to issue notes for sovereigns without restriction.

27. The limit we propose as the maximum gold reserve is £200,000. This amount represents one-quarter of the average note circulation of recent years (Rs. 12,000,000). An amount equal to half the note circulation ought ordinarily to be held as reserve in coin, and we consider that at least half this coin reserve should be in the form of rupees. We do not, however, wish it to be inferred that we suggest any fixed proportion of the note circulation as a suitable limit for the gold reserve. The great desideratum in this matter, we repeat, is certainty, and this will be most directly attained by making the limit a defined sum rather than a proportion of a constantly varying whole. We notice, for instance, that the present note circulation is very high (Rs. 15,704,090 on September 16), but we understand that it is likely to fall again before very long, and we are therefore not prepared to advise any extension of the limit beyond £200,000 unless and until the course of events shows that this could safely be done without endangering the silver reserve.

28. We desire to add that if our recommendation is adopted we consider it desirable that the Commissioners of Currency should issue to the press every evening a statement showing the amount of gold in the reserve, in order that the banks and the general public may be kept acquainted with the state of affairs.

29. In conclusion we must reiterate our conviction that in the present uncertainty lies the greatest danger of the situation, and in re-echoing His Excellency's desire for an early settlement of this vexed question, we venture to express the hope that if the course we have proposed is approved it may be found possible to give priority to the necessary amending Ordinance in the forthcoming Session of the Legislative Council.

ALFRED G. LASCELLES, Chairman.
W. H. FIGG.
E. ROSLING.
FRED. WM. BOIS.
W. T. HIGHTON.*
G. H. LOWE.
J. SPICER.
R. A. BROHIER.

Colombo, October 14, 1903.

MEMORANDUM BY MR. W. T. HIGHTON.

ALTHOUGH I have signed the above report, I am of opinion that the wisest plan will be for Government to repeal the Ordinance and the Order in Council making sovereigns legal tender.

Government is really in clover in having the Indian currency to circulate in the Colony without any trouble or responsibility in maintaining its relative value to gold. This is all done for them by the Indian Government, and there is no need that I can see for a gold reserve in Ceylon.

The effect of the Currency Commissioners not being in a position to issue notes for sovereigns when the reserve of gold amounts to £200,000 will be that a portion of the currency of the Colony, viz., sovereigns, will be inconvertible, and this may lead to grave inconvenience to all concerned. Sovereigns will be discredited—a very undesirable result—seeing that the Ceylon currency is on a gold basis, as pointed out by Mr. Chamberlain in paragraph 10 of his despatch dated August 11, 1903.

W. T. HIGHTON.

---

* Signed subject to the Memorandum annexed.

APPENDIX A.

MINUTES OF MEETINGS.

First Meeting: September 29, 1903.

All the members were present.

The Secretary read the terms of the Commission.

It was decided that it was unnecessary to call any evidence.

The Commission proceeded to discuss the despatch from the Secretary of State, and ultimately adjourned till September 30, at 7.30 A.M.

Second Meeting: September 30, 1903.

All the members were present.

After discussion of certain issues which were placed before the Commission, it was resolved that a report should be drafted for consideration at the next meeting, to be held on a date to be fixed later.

Third Meeting: October 8, 1903.

All the members were present with the exception of Mr. Rosling.

A draft report, previously circulated, was discussed, and, after certain amendments, agreed to.

Mr. Highton handed in a separate memorandum to be attached to the report.

The Commission adjourned *sine die*.

APPENDIX B.

TREASURY AND CUSTOMS RETURNS.

The following returns kindly furnished by the Hon. the Treasurer and the Hon. the Principal Collector of Customs correspond to those placed before the last Commission. These have been brought up to September 16, 1903.

TREASURY RETURNS.

1.—Statement showing exact holding in Rupees, Small Silver, Copper, and Gold on September 16, 1903.

	Rs.	Rs.
(*a*) In rupees	—	2,020,309
(*b*) In small silver, viz. :—		
50-cent pieces	—	
25-cent pieces	20,000	
10-cent pieces	70,000	
Mixed small silver	1,000	
		91,000
(*c*) In copper, viz. :—		
¼ cents	400	
½ cents	9,159	
1 cent	8,815	
5 cents	100	
Mixed copper coins	50,150	
		68,624
(*d*) In gold (£443,300)	—	6,649,500

2.—Statement showing the Monthly Issues of Rupees by the Currency Commissioners during 1901, 1902, and up to September 16, 1903.

Month.	1901.		1902.		1903.	
	Total Rupees issued.	Of this Total there were issued to the Banks.	Total Rupees issued.	Of this Total there were issued to the Banks.	Total Rupees issued.	Of this Total there were issued to the Banks.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
January	534,000	280,000	800,000	540,000	136,000	—
February	885,000	750,000	330,000	180,000	103,000	—
March	1,110,000	845,000	688,000	500,000	228,000	—
April	460,000	300,000	454,000	260,000	270,000	—
May	610,000	310,000	292,000	30,000	152,000	—
June	330,000	100,000	290,000	—	212,000	—
July	460,000	50,000	320,000	—	176,000	—
August	418,000	100,000	324,000	—	224,000	—
September	430,000	160,000	202,000	—	122,000*	—
October	640,000	360,000	—	—	—	—
November	243,000	—	134,006	—	—	—
December	694,000	589,000	97,000	—	—	—
Total for the Year ...	6,814,000	3,835,000	4,085,000	1,510,000	1,623,000	—
Monthly Average ...	567,833	319,583	340,416	—	—	—

* Up to September 16.

3.—Statement showing the Amount of Rupees received from the Banks and lodged in the Currency Commissioners' Vault during the Years 1901, 1902, and 1903.

	1901. Rs.	1902. Rs.	1903. Rs.
January	65,000	60,000	—
February	—	70,000	—
March	50,000	—	—
April	—	—	—
May	400,000	—	—
June	1,400,000	15,000	—
July	900,000	—	—
August	700,000	—	—
September ...	550,000	—	—
October	560,000	—	—
November	580,000	—	—
December	20,000	—	—
Total for the Year ...	5,225,000	145,000	—
Monthly Average ...	435,416	—	—

4.—Table showing the Receipts and Issues of Gold from November 1, 1901, to September 16, 1903.

Receipts (from the Banks).			Issues.					
	Amount.			Treasurer.		Banks.		Total.	
	£	Rs.		£	Rs.	£	Rs.	£	Rs.
1901.			1901.						
November	52,500	787,500	November ...	—	—	—	—	—	—
December ...	55,000	825,000	December ...	—	—	—	—	—	—
	107,500	1,612,500							
1902.			1902.						
January ...	—	—	January ...	500	7,500	64,000	960,000	64,500	967,500
February ...	5,000	75,000	February ...	—	—	42,500	637,500	42,500	637,500
March ...	3,000	45,000	March ...	50	750	—	—	50	750
April ...	53,500	795,000	April ...	850	12,750	2,600	39,000	3,450	51,750
May ...	13,000	202,500	May ...	2,000	30,000	10,000	150,000	12,000	180,000
June ...	50,000	750,000	June ...	2,000	30,000	—	—	2,000	30,000
July ...	91,000	1,365,000	July ...	4,000	60,000	4,000	60,000	8,000	120,000
August ...	80,666	1,209,990	August ...	500	7,500	—	—	500	7,500
September ...	6,000	90,000	September ...	2,500	37,500	—	—	2,500	37,500
October ...	125,000	1,875,000	October ...	4,500	67,500	—	—	4,500	67,500
November ...	22,000	330,000	November ...	4,000	60,000	2,000	30,000	6,000	90,000
December. ...	7,000	105,000	December ...	3,000	45,000	3,000	45,000	6,000	90,000
	456,166	6,842,490		23,900	358,500	128,100	1,921,500	152,000	2,280,000
1903.			1903.						
January ...	—	—	January ...	5,666	84,990	30,000	450,000	35,666	534,990
February ...	—	—	February ...	7,500	112,500	74,000	1,110,000	81,500	1,222,500
March ...	64,000	960,000	March ...	6,000	90,000	—	—	6,000	90,000
April ...	18,500	277,500	April ...	7,500	112,500	—	—	7,500	112,500
May ...	1,000	15,000	May ...	7,000	105,000	—	—	7,000	105,000
June ...	—	—	June ...	4,000	60,000	—	—	4,000	60,000
July ...	107,000	1,605,000	July ...	4,300	64,500	3,000	45,000	7,300	109,500
August ...	125,000	1,875,000	August ...	4,900	73,500	—	—	4,900	73,500
September 1 to 16	800	12,000	September 1 to 16	800	12,000	—	—	800	12,000
Total ...	316,300	4,744,500	Total ...	47,666	714,990	107,000	1,605,000	154,666	2,319,990

5.—Maximum and Minimum Note Issue of each Year from 1886 to 1903 (September 16).

Date.	Maximum Note Issue. Rs.	Date.	Minimum Note Issue. Rs.
December 23, 1886 ...	5,012,165	July 8, 1886 ...	3,612,160
December 19, 1887 ...	5,171,705	July 4, 1887 ...	3,676,705
December 21, 1888 ...	5,529,705	May 1, 1888 ...	4,699,705
December 23, 1889 ...	6,444,375	May 29, 1899 ...	4,669,705
December 10, 1890 ...	6,394,375	June 26, 1890 ...	4,614,375
November 25, 1891 ...	7,567,375	March 13, 1891 ...	5,918,375
December 16, 1892 ...	9,004,575	March 28, 1892 ...	5,977,375
January 6, 1893 ...	8,704,575	July 5, 1893 ...	6,913,005
December 6, 1894 ...	9,010,000	June 18, 1894 ...	6,125,000
December 21, 1895 ...	10,230,000	April 6, 1895 ...	7,105,000
December 15, 1896 ...	11,468,700	May 13, 1896 ...	7,365,000
January 5, 1897 ...	11,308,700	April 21, 1897 ...	7,943,700
September 9, 1898 ...	11,443,700	April 7, 1898 ...	7,473,325
December 29, 1899 ...	14,455,950	February 24, 1899 ...	10,198,700
January 5, 1900 ...	14,702,450	July 5, 1900 ...	11,632,450
December 23, 1901 ...	13,713,950	June 11, 1901 ...	10,096,450
November 6, 1902 ...	14,153,940	April 8, 1902 ...	9,836,450
September 7, 1903 ...	15,803,090	March 13, 1903 ...	11,842,950

6.—Note Issue Monthly from 1900 to September 16, 1903.

	1900. Rs.	1901. Rs.	1902. Rs.	1903. Rs.
January ...	14,152,450	12,767,450	11,456,450	13,372,450
February ...	13,912,450	11,882,450	10,688,950	12,036,950
March ...	13,087,450	10,846,450	10,023,200	12,672,950
April ...	12,162,450	10,446,450	10,246,450	12,496,090
May ...	12,057,450	10,256,450	10,166,450	12,244,090
June ...	11,692,450	11,406,450	10,731,450	11,936,090
July ...	13,407,450	11,831,450	11,296,450	13,276,590
August ...	13,847,450	12,081,450	12,433,940	14,840,190
September ...	12,937,450	12,156,450	12,239,940	15,704,090*
October ...	13,377,450	12,026,450	13,872,440	—
November ...	13,922,450	13,058,950	13,955,440	—
December ...	13,292,450	13,213,950	13,868,440	—

* Circulation on September 16, 1903.

7.—Currency Notes in Circulation and Coin Reserve in 1900, 1901, 1902, and 1903.

Date	Currency Notes in Circulation. Rs.	Coin Reserve. Rs.	Investments. Rs.	Proportion of Coin Reserve to Notes in Circulation. Per Cent.
1900.		Silver.		
January 31	14,152,450	7,849,777		55
February 28	13,912,450	7,609,777		54
March 31	13,087,450	6,784,777		52
April 30	12,162,450	5,859,777		48
May 31	12,057,450	5,754,777	6,302,672	47
June 30	11,692,450	5,389,777		46
July 31	13,407,450	7,104,777		53
August 31	13,874,450	7,544,777		54
September 30	12,937,450	6,634,777		51
October 31	13,377,450	7,074,777		53
November 30	13,922,450	6,907,609	7,014,840	49
December 31	13,292,450	6,277,609		47
1901.				
January 31	12,767,450	5,752,609		45
February 28	11,882,450	4,867,609		41
March 31	10,846,450	3,831,609		35
April 30	10,446,450	3,431,609		33
May 31	10,256,450	3,241,609		31
June 30	11,406,450	4,391,609		38
July 31	11,831,450	4,816,609	7,014,840	40
August 31	12,081,450	5,066,609		42
September 30	12,156,450	5,141,609		42
October 31	12,026,450	5,011,609		41
		Gold and Silver.*		
November 30	13,058,950	6,044,109		46
December 31	13,213,950	6,199,109		46
1902.				
January 31	11,456,450	4,441,609		39
February 28	10,688,950	3,674,109		34
March 31	10,023,200	3,008,359		30
April 30	10,246,450	3,231,609	7,014,840	31
May 31	10,166,450	3,151,609		31
June 30	10,731,450	3,716,609		34
July 31	11,296,450	5,121,609	6,174,840	45
August 31	12,433,940	6,359,099	6,074,840	51
September 30	12,239,940	6,288,799		51
October 31	13,872,440	7,921,299	5,951,140	57
November 30	13,955,440	8,004,299		57
December 31	13,868,440	7,917,299		57
1903.				
January 31	13,372,450	7,421,309		55
February 28	12,036,950	6,085,809	5,951,140	50
March 31	12,672,950	6,721,809		53
April 30	12,496,090	6,552,809		52
May 31	12,244,090	6,300,809		51
June 30	11,936,090	5,992,809	5,943,280	50
July 31	13,276,590	7,333,309		55
August 31	14,840,190	8,896,909		59
September 16	15,704,090	8,760,809	6,943,280	55

* For details of gold and silver separately see Table 7 (*a*).

7 (*a*).—Amounts of Gold and Silver respectively in the Coin Reserve since the enactment of the Gold Legislation.

Date.	Coin Reserve. Gold. £	Silver. Rs.	Total. Rs.
1901.			
November 6	—	5,236,609	5,236,609
November 30	52,500	5,256,609	6,044,109
December 31	107,500	4,586,609	6,199,109
1902.			
January 31	43,000	3,796,609	4,441,609
February 28	5,500	3,591,609	3,674,109
March 31	8,450	2,881,609	3,008,359
April 30	58,000	2,361,609	3,231,609
May 31	59,500	2,259,109	3,151,609
June 30	107,500	2,104,109	3,716,609
July 31	190,500	2,264,109	5,121,609
August 31	270,666	2,299,109	6,359,099
September 30	274,166	2,176,309	6,288,799
October 31	394,666	2,001,309	7,921,299
November 30	410,666	1,844,309	8,004,299
December 31	411,666	1,742,309	7,917,299
1903.			
January 31	376,000	1,781,309	7,421,309
February 28	164,500	3,618,309	6,085,809
March 31	222,500	3,384,309	6,721,809
April 30	233,500	3,050,309	6,552,809
May 31	227,500	2,888,309	6,300,809
June 30	223,500	2,640,309	5,992,809
July 31	323,200	2,485,309	7,333,309
August 31	443,300	2,247,409	8,896,909
September 30	460,800	1,905,309	8,877,309

8.—Statement showing the Total Amount of Small Silver Coins struck at the Royal Mint for the Ceylon Government since the Introduction of the Subsidiary Coinage.

Year.	50 Cents. Rs.	25 Cents. Rs.	10 Cents. Rs.	Total. Rs.
1892	125,000	125,000	250,000	500,000
1893	375,000	375,000	250,000	1,000,000
1894	—	—	300,000	300,000
1895	200,000	300,000	—	500,000
1897	—	—	150,000	150,000
1899	50,000	150,000	100,000	300,000
1900	100,000	100,000	100,000	300,000
1902	100,000	100,000	100,000	300,000
1903	—	—	—	—
Total	950,000	1,150,000	1,250,000	3,350,000

9.—Statement showing (1) Amounts of Small Silver lodged in Vault, (2) Demand by the Banks, (3) Issues to Banks, and (4) Issues to Treasurer, for the Years 1900, 1901, 1902, and 1903.

Denomination.	Lodged in Vault. Rs.	Demand by Banks. Rs.	Issued to Banks. Rs.	Issued to Treasurer. Rs.
1900.				
50 cents	—	114,000	40,000	15,000
25 cents	15,000	110,000	65,000	30,000
10 cents	10,000	141,000	45,000	25,000
Mixed	152,000	—	43,000	75,000
Total	177,000	365,000	193,000	145,000
1901.				
50 cents	—	59,000	5,000	5,000
25 cents	—	67,000	5,000	10,000
10 cents	—	66,000	10,000	5,000
Mixed	292,000	—	85,000	155,000
Total	292,000	192,000	105,000	175,000
1902.				
50 cents	—	98,100	75,000	5,000
25 cents	—	95,500	76,000	13,000
10 cents	—	82,000	58,000	2,000
Mixed	226,000	12,500	5,000	168,000
Total	226,000	288,100	214,000	188,000
1903.				
50 cents	6,000	170,500	94,000	32,000
25 cents	7,000	30,000	25,000	62,000
10 cents	6,000	23,500	25,000	16,000
Mixed	108,000	10,000	25,000	87,000
Total	127,000	234,000	169,000	197,000

CUSTOMS RETURNS.

10.—Import of Silver during 1901, 1902, and the first Eight Months of 1903.

Country from which imported.	1901. Rs.	1902. Rs.	1903 (up to August 31). Rs.
United Kingdom	38,787	—	152,038
British Colonies.			
British India	5,840,813	3,368,600	3,692,950
Hongkong	—	1,050	—
Straits Settlements	105,755	194,507	138,440
Mauritius	—	4,300	12,000
Foreign Countries.			
China	30,855	40,743	8,600
Japan	3,000	—	—
India (except British)	6,500	—	—
United States of America	—	—	—
	6,025,710	3,609,200	4,004,028

11.—Statement showing the Amount of Silver Coin imported into the Island during the Years 1897–1902.

Countries.	1897. Rs.	1898. Rs.	1899. Rs.	1900. Rs.	1901. Rs.	1902. Rs.
United Kingdom	200,155	4,718	—	56,450	38,787	—
British Colonies.						
Aden	100,000	—	—	—	—	—
British India	11,546,191	9,632,818	9,718,000	7,374,814	5,840,813	3,368,600
Hongkong	232,360	336,180	243,485	73,754	—	1,050
Mauritius	—	50,000	—	—	—	4,300
Malta	—	—	2,400	—	—	—
Straits Settlements	93,106	94,502	127,343	122,834	105,755	194,507
Foreign Countries.						
China	28,360	12,775	38,150	—	30,855	40,743
France	—	—	—	—	—	—
India (excluding British)	—	—	—	—	6,500	—
Japan	—	1,400	5,916	—	3,000	—
United States of America	—	—	—	1,500	—	—
Total	12,200,172	10,132,393	10,135,294	7,629,352	6,025,710	3,609,200

12.—Statement showing the Value of Silver Coins imported into Ceylon during the first Eight Months of 1903, showing the Value for each Month separately.

Country from which imported.	January.	February.	March.	April.	May.	June.	July.	August.
United Kingdom	152,000	—	—	—	—	—	—	38
Aden	—	—	—	—	—	—	—	150,000
Calcutta	—	*1,950,000*	—	—	—	—	—	—
Bombay	—	—	400,000	—	250,000	—	270,000	50,000
Melbourne	—	—	—	—	—	—	—	—
Tuticorin	150,000	—	—	—	—	—	—	—
Tondi	—	—	—	—	1,000	—	—	—
Singapore	48,120	41,250	—	3,000	—	14,250	20,700	9,000
Penang	8,250	15,000	6,000	3,000	7,500	6,009	14,000	4,320
Hongkong	96,000	—	—	—	28,000	—	84,000	72,000
Mauritius	—	—	—	—	—	—	12,000	—
China	2,600	—	—	—	3,000	3,000	—	—
Madras	—	—	—	—	30,000	—	100,000	—
	456,970	2,006,250	406,000	6,000	319,500	23,250	500,700	285,358

Total for eight months, Rs. 4,004,028, but this includes Rs. 1,950,000 imported by the Currency Commissioners at expense of Government. The ordinary imports for the eight months amount to Rs. 2,054,028.

13.—Export of Silver during 1900, 1901, 1902, and first Eight Months of 1903.

Country to which exported.	1900. Rs.	1901. Rs.	1902. Rs.	1903 (up to August 31). Rs.
United Kingdom	15,000	—	—	—
British Colonies.				
British India	868,395	1,923,100	350,000	1,600*
Burma	—	300,000	250,000	—
Mauritius	1,275,000	—	120,000	—
Total	2,158,395	2,223,100	720,000	1,600

* To British India in January, 1903.

14.—Import of Gold since the enactment of the Gold Legislation.

Country from which imported.	November and December, 1901. £	1902. £	1903 (to Aug. 31). £
United Kingdom	—	2,570	2,000
British India	70,000	307,000	70,300
Australia	70,000	215,000	351,000
Straits Settlements	500	—	—
France	390	2,050	1,358
Egypt	—	100	—
Total	£140,890	526,720	424,658

15.—Statement showing the Value of Gold imported into Ceylon during the first Eight Months of 1903, showing the Value for each Month separately.

Countries from which imported.	January.	February.	March.	April.	May.	June.	July.	August.
	£	£	£	£	£	£	£	£
United Kingdom ...	—	500	500	—	—	500	—	500
Bombay	—	300	—	30,000	—	—	—	—
Calcutta	—	—	—	20,000	20,000	—	—	—
Madras	—	—	—	—	—	—	—	—
Tuticorin	—	—	—	—	—	—	—	—
Victoria	—	—	86,000	50,000	—	—	125,000	90,000
West Australia ...	—	—	—	—	—	—	—	—
Egypt	—	—	400	400	208	200	—	150
France	—	—	—	—	—	—	—	—
Total ...	—	800	86,900	100,400	20,208	700	125,000	90,650

Total for eight months, Rs. 424,658.

16.—Export of Gold since enactment of the Gold Legislation.

Country to which exported.	November and December, 1901.	1902.	1903. (to August 31).
	£	£	£
British India	20,000	29,300	266,000*

* Including £130,000 exported by the Commissioners of Currency in exchange for rupees.

APPENDIX C.

EXTRACTS FROM REPORTS OF GOVERNMENT AGENTS RELATIVE TO THE CIRCULATION OF GOLD IN CEYLON.

THE Government Agents have issued the following amounts to the public :—

	£
Up to the 31st March, 1903	4,342
April, 1903	7,108
May, 1903	4,324½
June, 1903	6,887
July, 1903	7,704½
August, 1903	6,304
Total ...	36,670

For the five months April to August of the present year (1903) the average issue is about £6,500 a month. The following extracts from the Government Agents' reports show the degree of acceptance which the sovereign has met with in the different Provinces :—

WESTERN PROVINCE.

July 1, 1903.—During the month of June I received 547 sovereigns in exchange (of which 500 were received on the 8th), which, with the balance of 15 sovereigns in my hands on the 31st May, made a total of 562 sovereigns.

All the sovereigns in the vault were issued in payment in the course of the month.

I am taking steps to keep the Treasury officer, Negombo, supplied with gold, which, I understand, finds ready exchange there.

CENTRAL PROVINCE.

August 18, 1903.—There is no demand at present for sovereigns from the general public in the Nuwara Eliya District.

September 14, 1903.—There has been a very slight increase in the demand for gold in Nuwara Eliya during the past month. If more half-sovereigns were available the demand for gold would be stimulated.

July 14, 1903.—Gold is readily accepted at the Matale Kachcheri, and £140 have been issued during the month.

PROVINCE OF UVA.

March 21, 1903.—Upon the receipt of the instructions I took steps to give immediate effect to the orders of Government, as follows :—

The shroff daily explains the advantages of gold to people attending his office.

The shroff, in making payments, always offers—

(1) One-third in gold for Rs. 90 or over;
(2) Gold, whenever the payee wishes.

The shroff on all occasions notifies his readiness to accept sovereigns in payment of Government dues.

Sovereigns are issued in exchange for silver so long as the stock of gold is large enough.

It seems that this action has had some effect, as during the three weeks of the current month I have paid out 256 sovereigns: 217 for Government dues and 39 by way of exchange. During the same period I have received 43 sovereigns: 42 for Government dues and one by way of exchange.

On the 20th ultimo I started with 500 sovereigns received from the Treasury. I have now 261 sovereigns in the vault. The summary of account is as follows :—

	£
Received	500
Paid out in February	26
	474
Paid in in March	43
	517
Paid out in March	256
	261

May 2, 1903.—There are satisfactory signs that gold is being brought into use as a circulating medium. During the two months (and a week over) between 20th February and 30th April I received £1,178; that is to say, £1,000 from the Treasury, £173½ on account of Government dues, and £4½ by way of exchange. My payments within the same period amounted to £985½, namely, £862½ for Government dues and £123 by way of exchange.

The more half-sovereigns the better.

May 22, 1903.—I have the honour to report for the information of Government that in this Province it is no longer the practice of Chetties and others to charge any commission on sovereigns exchanged. The reason for this is that gold is now in free circulation. During the past three months I have paid out sovereigns and half-sovereigns amounting to (in round numbers) £1,300.

June 2, 1903.—The use of gold as a circulating medium is steadily increasing. During the three months (and a week over) between the 26th February and the 31st May I received £1,985½; that is to say, £1,700 from the Treasury, £280 on account of Government dues, and £5½ by way of exchange. My payments within the same period amounted to £1,470, namely, £1,297 for Government dues and £103 by way of exchange.

August 5, 1903.—The figures for July show a slight falling off in my transactions as compared with the returns for the previous month. This decrease is due to the fact that I had not a sufficient quantity of half-sovereigns, for which the demand is much greater than for sovereigns.

September 7, 1903.—The payments show a slight improvement on the figures for last month, and would have been much greater had I been able to supply half-sovereigns.

NORTHERN PROVINCE.

June 15, 1903.—A desire to receive gold in payment of orders of payment is now noticeable among the people in this district, but not a single sovereign out of all the gold that has been issued to the public since the introduction of the gold currency has ever been known to come back in the course of receipts at the Kachcheri.

NORTH-CENTRAL PROVINCE.

March 31, 1903.—On the 12th August, 1902, a sum of Rs. 750 (50 sovereigns) was received in gold. This supply, which lasted a month, was disposed of in paying contractors, who readily accepted sovereigns.

The fact that the Kachcheri was supplied with gold having been noised about, there was a rush for it, especially among goldsmiths, evidently for the purpose of making ornaments. Another supply of Rs. 3,000 (200 sovereigns) was obtained on the 12th December last, out of which at present there remains only a balance of Rs. 105 (7 sovereigns), the rest having been disposed of to the District and Irrigation Engineers and others, as required by the Circular.

The issue of gold to goldsmiths is discouraged.

It may be mentioned that the ordinary villager declines gold, but it is hoped that when gold comes to be largely used this reluctance will give way.

A sum of about Rs. 2,000 in gold can be disposed of every month.

EASTERN PROVINCE.

April 2, 1903.—The effort to popularize the gold currency in this district has met with some success during this first month, and will, I anticipate, meet with much more, as the advantages are more generally recognized.

Two hundred and eighty-nine sovereigns in all were issued during the month, of which about one-third were in exchange for notes and silver; and 32 sovereigns were accepted in payment of Government dues, a great increase on any previous month, the average having been 4 or 5.

The unwillingness to receive part payments in gold, which was very manifest at the outset, is being gradually overcome, though in no case yet has one-third of the amount due been accepted.

May 7, 1903.—Payees in this district are still unwilling to receive one-third—and in many cases any portion at all—of their payments in gold. The demand for sovereigns was less than in March, 205 being issued as against 289; but, on the other hand, 89 were paid into the Kachcheri as against 32.

*May 4, 1903.**—I only received a consignment of sovereigns and half-sovereigns from the Hon. the Treasurer on the 7th April. Since that date I have issued from this Kachcheri 324 sovereigns and 120 half-sovereigns in making payments.

This district is somewhat peculiar in the matter of currency, as very few currency notes are used in ordinary business transactions. Rupees are the circulating medium owing to a constant traffic between the coast of India and Trincomalee.

Consequently this district ought to be a favourable one for the circulation of sovereigns, provided that in the southern parts of India there is no difficulty in taking sovereigns. For this reason I am waiting with some interest to see whether in future the tindals of schooners take sovereigns readily. I am informed that one tindal took with him 60 sovereigns as a speculation, and if he brings a favourable report I have little doubt that a good many sovereigns will find their way back to India from this port. If, on the other hand, the tindal finds a difficulty, or has to pay a large commission in India on changing his sovereigns, the leakage of rupees to India will continue.

I have observed that at a land sale payment in sovereigns was tendered for a few of the lands (and of course accepted) within a very few days after I commenced to issue the sovereigns. It seems probable therefore that this was done as a test to see if the sovereigns were readily accepted at the Kachcheri.

I am told that boutique-keepers still charge a commission on giving change for a sovereign, but so they do on giving change for notes or even for rupees.

I understand that sovereigns have also been circulated by the Military authorities.

I shall probably apply shortly for a second consignment of sovereigns.

June 2, 1903.—Tindals between Trincomalee and India are continuing to take sovereigns to India.

June 12, 1903.—Gold is now circulating freely in the Trincomalee District, and I have heard of no difficulties in connection therewith.

---

* This and the two following reports are from the Assistant Government Agent, Trincomalee.

Payment is made on His Majesty's ships in gold, and a good many of the sovereigns paid out on the ships find their way to the local Post Office as well as to the shops and bazaars. In changing private cheques locally I have received a mixed quantity of sovereigns, notes, and rupees.

I find from the return kept at the Kachcheri that since the 23rd April sovereigns have frequently been received into the Kachcheri, but the issue of gold steadily exceeds the receipt.

I should also mention that tindals of sailing vessels trading with India take away with them a fair quantity of sovereigns, and I understand that they find no difficulty in converting them into rupees in India. We may therefore hope to send away some of our surplus gold to India by this means.

There is a demand here for half-sovereigns, but I have none to issue.

July 6, 1903.—The number of sovereigns received during the month of June, 1903, was about normal, but the issues show a great increase. This, however, is chiefly due to the privilege accorded traders of exchanging other denominations of cash for gold, the issue for genuine payments being still far short of what the Circular desires.

Traders bring notes and rupees and receive sovereigns in exchange, and in this way more gold is put into circulation than by means of gold payments in the ordinary Kachcheri transactions.

North-Western Province.

April 4, 1903.—People had objections to receive gold when it was first introduced here, but I find they are gradually getting used to it now, and I think that their reluctance will disappear.

I have paid £709 during last month, and hope to be able to issue a larger amount during this month.

I understand, however, that Chetties and other money changers charge a commission of 25 cents on each sovereign changed by them.

Unless some measures are devised to remove this obstacle, I am afraid that the sovereign will not be very popular among villagers and the poorer classes.

May 15, 1903.—There is still some reluctance on the part of the public, especially the poorer classes, to accept sovereigns.

Southern Province.

April 21, 1903.—During the present month a little more gold is being received and issued, but the people show much reluctance in accepting it. I anticipate that the April return will show a small increase.

May 14, 1903.—Satisfactory progress has been made in the circulation of gold in making payments during the last month; the people do not show so much reluctance to accept gold coins as they did at first.

June 13, 1903.—Payments in gold are appreciated by the public.

August 14, 1903.—The demand for gold appears to be increasing.

September 7, 1903.—It is reported that some difficulty is occasionally experienced at Matara in obtaining change for sovereigns just as for notes of a value of more than five rupees, and in consequence there is a demand for half-sovereigns.

APPENDIX D.

REPORT FROM THE HON. THE TREASURER.

REPORT from the Treasurer addressed to Government dated 9th September, 1903 :—

THE banks appear to argue that gold is not as yet very popular as a circulating medium, because their own receipts of gold over the counter are very nearly equivalent to the amount paid out by them, but it would appear to me that that fact is also susceptible of an opposite interpretation, and I am inclined for my own part to look forward to an announcement on the part of the Government Agents that gold is being paid in freely to the Kachcheries in discharge of Government dues, as an indication that the sovereign is really in circulation.

At the rate at which gold is now being issued from the Kachcheries, it cannot, I think, be long before it begins to come back again.

At present only £2,481 have been received in the Kachcheries from private hands, whilst £33,674½ have been issued by them to the people. I would point out that what has been accomplished in the way of popularizing gold, having been the work of but a few months, appears to me (*pace* the Bank Managers) to transcend the most sanguine expectation.

I find that since the beginning of November, 1901, there have been imported into the Island 1,097,268 sovereigns ; of this 315,900 have been exported through the Customs, leaving 781,368.

There have been taken away by foreign vessels, chiefly men-of-war, about 101,368, leaving in the Island about 680,000, which on the 15th August was distributed as follows :—

	£
In the Banks	59,134
In the Treasury...	385,700
In the Kachcheries	8,012½
	452,846½

£680,000 — £452,846½ = £227,153½, of which what has not been exported in the form of private remittances to India must be in the hands of the general public in Ceylon.

No doubt a large quantity of this gold has found its way over to India in the hands of small native traders. So much the better ! for so far as it has done so, it has accomplished its chief object, viz., that of taking the place of the rupee as a medium of exchange between this and India. If, on the other hand, it has not done so, or rather, so far as it has not done so, then it would appear to have realized our expectation that it would to some extent form a more convenient medium of local trade than either the rupee or the currency note.

The opinion announced by the banks (in answer to my inquiry) that "there appears to be no demand for sovereigns as a circulating medium amongst the general public of this Island" seems to be somewhat emphatically refuted by the fact that of the £227,153½, which are now either in use by the general public or have been used by them for purposes of private remittance to India, only £29,729 have been issued from the General Treasury, leaving the inevitable conclusion that the balance £197,424½ must have been furnished to the public by the banks themselves ; and out of this sum only £31,637 were paid to Public Departments, the Ceylon Government Railway, Public Works Department, &c.

I must add that the correctness of my figures and deductions are not admitted by the Agent of the Bank of Madras. I am getting more detailed information for him from the Customs, but I do not myself think it likely that further light will be thrown upon the matter by any further scrutiny.

The suggestion of regret that so large a sum of gold as is at present stored in the Treasury vaults should be "lying idle" may to some extent be removed by the reflection that it is due to that accumulation that we may look forward to a return of interest next year on the investments of the Currency Commissioners amounting to a minimum of Rs. 240,000.

H. H. CAMERON,
Treasurer.

APPENDIX E.

NOTE ON THE COST OF IMPORTING RUPEES.

Details regarding the exchange of sovereigns for rupees effected by the Commissioners of Currency in pursuance of the recommendation in the interim report of the Currency Commission dated November 21, 1902 :—

A.—130,000 sovereigns were exchanged for 1,950,000 rupees.

B.—The expense involved was as follows :—

	Rs.	c.
Cost of freight, insurance, &c., of the gold	4,509	2
Calcutta Agents' charges for receiving the gold and despatching the silver (including freight and insurance of latter)	6,829	59
Cost of counting the rupees in Colombo	214	75
	11,553	36

(This is Rs. 634·14 less than ¼ per cent.)

C.—The sovereigns were shipped on January 3, 1903. The rupees were received in three lots as follows :—

Rs.	
1,200,000	on February 4, 1903
726,000	on February 9, 1903
24,000	on February 17, 1903
1,950,000	

DRAFT ORDINANCE.

An Ordinance to further amend "The Ceylon Paper Currency Ordinance, 1884."

Preamble.

WHEREAS it is expedient to amend the Ceylon Paper Currency Ordinance, hereinafter referred to as "the principal Ordinance," in certain particulars: Be it therefore enacted by the Governor of Ceylon, by and with the advice and consent of the Legislative Council thereof, as follows :

Short title.

1 This Ordinance may be cited as "The Ceylon Paper Currency (Amendment) Ordinance, 1903," and shall be read and construed as one with the principal Ordinance, and the principal Ordinance and the Ordinances amending the same and this Ordinance may be cited together as "The Ceylon Paper Currency Ordinances, 1884 to 1903."

Amendment of section 11 of principal Ordinance regarding issue of currency notes.

2 For section 11 of the principal Ordinance, as amended by section 3 of Ordinance No. 13 of 1901, the following section shall be substituted :

(1) The commissioners shall, on the demand of any person, issue currency notes in exchange for the amount thereof in silver rupees of India.

(2) The commissioners may also issue such notes in exchange for the amount thereof in gold coin, which is legal tender in Ceylon, under any Order of His Majesty the King in Council ; but the commissioners may decline to do so whenever it is inexpedient in their judgment to increase the amount of gold coin held as reserve under this Ordinance.

By His Excellency's command,

EVERARD IM THURN,
Colonial Secretary.

Colonial Secretary Office,
Colombo, October 23, 1903.

XXVIII.—1903.

REPORT

ON

THE FINANCIAL AFFAIRS OF CEYLON

DURING THE PERIOD 1896-1902.

BY THE HON. MR. F. R. ELLIS, C.M.G.,
Auditor-General.

Ordered by His Excellency the Governor to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 30 cents.

1903.

REPORT ON THE FINANCIAL AFFAIRS OF CEYLON, 1896-1902.

APPENDIX A gives a comparative statement of the revenue and expenditure of the Colony for two periods, seven years of His Excellency Sir J. West Ridgeway's administration and the previous seven years.

It will be seen that the total increase in revenue in the latter period amounted to Rs. 177,993,992 — Rs. 126,520,612 = Rs. 51,473,380. In other words, the average annual revenue for the period 1896-1902 is Rs. 7,353,340 higher than the annual average revenue for the previous seven years.

When His Excellency assumed office the financial affairs of the Colony were apparently passing through a period of depression. The surplus of revenue over expenditure, which in 1891 amounted to Rs. 1,190,318, sank in 1892 to Rs. 116,188, and in the following three years expenditure exceeded revenue by no less than Rs. 2,027,342, thus almost sweeping away the surplus of the previous four years amounting to Rs. 2,348,331. The net surplus for the seven years amounted to only Rs. 320,989.

During His Excellency's administration the expenditure has never once exceeded the revenue. The smallest surplus, Rs. 540,508 in 1901, amounts to nearly double the total net surplus for the whole of the previous seven years, while the net surplus between 1896 and 1902 amounts to Rs. 9,766,505, or about thirty times the net surplus of the previous seven years.

It will be further seen from columns 2 and 4 that the progress was continual. In only one year, 1901, did the revenue of any year fall below that of its predecessor.

It is satisfactory to note that this large surplus was not, if I may use the expression, frittered away on expenses connected with the ordinary administration of the Colony. No less a sum than Rs. 7,745,104 has been expended, or rather invested, in railway construction; Rs. 612,923 has been devoted to irrigation works; Rs. 876,077 remained undisposed of at the end of 1902, while Rs. 197,734 had to be used to repay the excess of expenditure over revenue prior to 1896. This accounts for Rs. 9,431,838 out of the total surplus of Rs. 9,766,505, leaving only a sum of Rs. 334,667 disbursed on what may be called ordinary expenditure.

In order to deal with the different heads of revenue which have contributed to these satisfactory results, we must turn to Appendix B. It will be seen from Appendix A that the revenue for 1895 was the largest collected in the first period of seven years.

Now, running the eye down the columns headed "Deficit as compared with 1895" in Appendix B, it will appear that during the period of His Excellency's administration there was in each year an excess over the maximum revenue of the previous period under each head of revenue, with the exception of four small items, none exceeding Rs. 6,000, and the sums of Rs. 82,835 and Rs. 70,545 under the head "Miscellaneous Receipts" in 1901 and 1902, and a similar falling off of Rs. 89,475 and Rs. 125,855 in the same years under the head "Sale of Government Property," and Rs. 50,586 in 1900 under the same head. These will be accounted for later on.

1896 AND 1897.

It will be noticed that during the years 1896 and 1897 the deficit columns, whether those referring to 1895 or the previous year, contain no entry of over Rs. 5,000, with the exception of one Customs deficit of Rs. 220,286 in 1896. Under every head of revenue there appears an excess. This shows clearly that the increase is due to a general advancement in prosperity in every department of trade or agriculture. It is singular that on only one other occasion does the Customs revenue show a deficit in any year as compared with the previous one. This was in 1901, when the Customs seemed to have shared in the general depression which marked that year.

1898.

In the year 1898 there are two entries in the column "Deficit as compared with previous year":—

	Rs.
(*a*) Licenses, Miscellaneous	80,120
(*b*) Miscellaneous Receipts	136,932

(*a*) singularly enough is due mainly to the falling off in the sale of stamps, the figures being: 1897, Rs. 995,533; 1898, Rs. 913,216. This may perhaps be the result of the sales to companies in 1897 of a considerable number of estates. This involved large purchases of stamps for transfers. Under (*b*) the figures are as follows: Overpayments recovered, 1897, Rs. 252,756; 1898, Rs. 52,705. This is really only a matter of accounts. The Railway Department made a mistake in accounting in 1896, and was obliged to adjust this in 1897 by an entry showing a payment on account of surcharge of Rs. 202,951 in 1897.

1899.

In 1899 the following heads of revenue show a deficiency when compared with the previous year:—

	Rs.
(*a*) Licenses, Miscellaneous	60,439
(*b*) Post and Telegraphs	49,559
(*c*) Rent of Government Property	14,343
(*d*) Interest	141,338
(*e*) Sale of Government Property	10,515

The probable reasons are as follows :—

(*a*) The falling off in stamps which began in 1898 continued throughout this year, the figures being : 1898, Rs. 913,216 ; 1899, Rs. 853,036 ; deficiency, Rs. 60,180.

(*b*) This is due to the fact that recoveries for five quarters were brought to account in 1898, and for only four quarters in 1899.

(*c*) This falling off is only apparent, not actual. The lease money on plumbago lands was in 1898 brought to account under this head, but in 1899 it was transferred to Land Sales, sub-head Premia on Leases.

The figures are as follows :—

		Rs.
1898	Rent of Land	50,475
	Premia on Leases	6,061
		56,536
1899	Rent of Land	36,293
	Premia on Leases	72,650
		108,943

so that really the revenue instead of having diminished had almost doubled.

(*d*) This is mainly due to the realization of 8 lacs of Indian paper in this year, the interest paid of course proportionately decreasing. An exceptional sum of Rs. 52,500 on account of Currency Note Depreciation Fund was also credited under this head in 1898. This is an exceptional receipt, and will probably not occur again for some years. It is the payment of an excess, when it accumulates, on the sum set aside to meet possible losses on investments.

(*e*) This is mainly due to the introduction of a new system of Forest accounts. Formerly the gross value of timber sold appeared as revenue, although the larger part of the sum brought to account had been first paid by Government as cost of felling and removal. In this year in certain Provinces, only the royalty was brought to account, as it is clear that this alone is revenue.

A further loss under this head is due to the fact that in this year the sale of drugs was transferred from this general head "Miscellaneous" to the head "Fees of Court, &c."

1900.

In 1900 there are only three large items entered in the deficit column :—

	Rs.
(*a*) Rent of Government Property	16,421
(*b*) Miscellaneous Receipts	57,064
(*c*) Sale of Government Property	112,919

(*a*) is chiefly due to the alteration in bringing to account money obtained from plumbago leases.

(*b*) Nearly the whole of this decrease comes under the sub-head "Sundries," and the exact cause is difficult to trace.

(*c*) This is due to the extension of the system by which the Forest Department works on an advance, and brings to account as revenue only royalty or actual profits.

The figures for timber and firewood are : 1899, Rs. 486,472 ; 1900, Rs. 378,937 ; deficiency, Rs. 107,535.

1901.

The year 1901 was marked by a general depression which made itself felt under most of the heads of revenue. Under eight of these there was a decrease as compared with 1900, and under six alone was there an increase. This was the only year during the whole period in which the revenue collected was lower than that of the preceding year.

1902.

In 1902 the Island had recovered from the depression of the previous year, the revenue being considerably in excess of that of 1901, and only Rs. 127,874 lower than that of 1900.

The deficiencies as compared with 1901 are—

	Rs.
(*a*) Port and Harbour Dues	31,490
(*b*) Licenses, Miscellaneous	41,938
(*c*) Sale of Government Property	36,380

(*a*) may be looked on as accidental, and is due to smaller importation of rice towards the close of the year and the arrival of a smaller number of vessels.

(*b*) is again due to a falling off in the sale of stamps, the deficiency amounting to Rs. 36,573.

(*c*) This again is due to the Forest Department, which realized Rs. 32,362 less by the sale of timber and firewood.

TAXATION.

In analyzing the contents of Appendix B, it is interesting to remark how comparatively small a portion of the revenue is raised by taxation, direct or indirect.

Taking the year 1902 as an example, and running the eyes down the heads of revenue, it would appear that the following items alone can be classed as the proceeds of taxation :—

	Rs.
Customs	7,181,212
Licenses, Excise	6,057,748
Fees of Court	1,837,649
Miscellaneous	90,888
	15,167,497

Port and Harbour Dues have not been included, because only a very small portion of the sum collected is paid by the Colony, and it seems to be rather a payment for accommodation provided than a tax.

From Licenses must be deducted a sum of Rs. 146,724, being fines inflicted in the courts; this cannot be called taxation.

The following are the sub-heads into which "Fees of Court" are divided; the items which can properly come under the head "Taxation" are put in a separate column :—

	Recoveries. Rs.	Taxation. Rs.
Judicial Stamps	—	524,437
Police within Municipal limits	—	97,064
Police outside Municipal limits	—	72,131
Survey Fees	90,163	—
Irrigation Recoveries	67,502	—
Hospital Stoppages	11,463	—
Refund Hospital Expenses	35,410	—
Medical College Fees	15,244	—
Collections at Dispensaries	23,635	—
Sale of Drugs	11,731	—
Medical Aid Dues	224,599	—
Fees for Bills of Health	15,739	—
Cemetery Fees	624	—
Storage of Gunpowder	10,005	—
Value of Prison Labour	5,532	—
School Fees	29,916	—
School Books and Stationery	15,590	—
Government Gazette—Printing, &c.	21,459	—
Passage Money of Coolies	24	—
Value of Tools lost	2,893	—
Colombo Water Supply	172,500	—
Warehouse Rent	317,845	—
Pioneer Pension Stoppages	1,448	—
Fees under Inventions Ordinance	2,415	—
Fees for Title Deeds	18,536	—
Hire of Anchors	10,905	—
Sundries	38,825	—
Total	1,144,003	693,632

Miscellaneous receipts are accounted for as follows :—

	Rs.
Sale of old Stores	8,289
Overpayments recovered	23,045
Unclaimed Deposits	45,870
Value of salved Coal	4,375
Sundries	9,309
Total	90,888

None of these items can fairly be considered as taxation.

It is necessary, therefore, to amend the original statement, which showed Rs. 15,167,497 as the amount collected by taxation.

The correct figures are as follows :—

	Rs.
Customs	7,181,212
Licenses, deducting Fines	5,911,024
Fees of Court	693,632
Total	13,785,868

It thus appears that only one-half the total revenue was recovered by taxation.

It seems singular that the proceeds of the only universal direct tax payable in the Colony should not appear either in the revenue or expenditure side of the Government accounts. The road or commutation tax is collected by the Road Committees, but two-thirds is paid to Government, or rather to the Director of Public Works, who expends it on the upkeep of the principal roads, and thus diminishes the amount which has to be contributed from revenue for this purpose.

The amounts thus paid are as follows :—

Year.	Rs.	Year.	Rs.
1895	281,942	1899	306,655
1896	293,260	1900	318,073
1897	292,669	1901	316,673
1898	303,853	1902	320,722

The reason of this appears to be that when the tax was originated it was feared that the proceeds might be devoted to purposes other than those for which it was raised, the construction and improvement of the public thoroughfares. It was therefore decided that the money should not pass into the hands of Government at all, but should be paid to the officer responsible for the upkeep of the roads. The consequence is that this large sum, though expended by Government servants on Government work, does not appear in the Government accounts, and is only audited by the officers of the Road Committees. The figures given above only represent two-thirds of the sum collected, which amounted in 1902 to Rs. 481,083. This sum must therefore be added to the sum recovered by taxation, and brings the total to Rs. 14,266,951.

The total sum collected in 1902 would then appear to be Rs. 27,198,056 + Rs. 481,083 = Rs. 27,679,139, out of which there was—

	Rs.
Recovered by taxation	14,266,951
Otherwise recovered	13,412,188
Total	27,679,139

These figures cannot, I think, be regarded as otherwise than satisfactory.

REVENUE OF 1902 COMPARED WITH REVENUE OF 1895.

The best way of comparing the progress of the Island is to place the revenue of 1895 and 1902 in two parallel columns under the proper heads.

	1895. Rs.	1902. Rs.	Increase. Per cent.
Customs	5,481,595	7,181,272	31
Port and Harbour Dues ...	887,304	1,299,728	46
Licenses, Excise, &c.:			
Salt	1,003,704	1,186.069	18
Arrack, Rum, and Toddy ...	2,479,539	3,378,219	36
Miscellaneous	1,304,209	1,493,460	14½
Fees of Court, &c.	1,409,104	1,837,649	30
Post and Telegraphs	688,500	1,110,785	61
Government Railway ...	6,222,736	7,977,590	28
Rent of Government Property ...	103,964	126,891	22
Interest	355,996	503,347	41
Miscellaneous Receipts ...	161,433	90,888	Decrease
Sale of Government Property ...	455,530	329,675	Decrease
Land Sales	429,194	682,483	59
Total ...	20,982,808	27,198,056	

It will be seen that the percentage of increase was greatest under the heads "Post and Telegraphs" and "Land Sales," but in almost every department satisfactory progress was made.

A comparative statement of the revenue of the Colony for the years of His Excellency's administration is added, marked "C." It shows the revenue under its sub-heads as well as principal heads.

A statement (H) showing the expansion of the arrack revenue is also annexed.

EXPENDITURE.

A comparative statement of expenditure, marked "D," is annexed.

Although it is apparent that there has been a considerable increase in expenditure in the period of His Excellency's administration, the Appendix A shows that it has been proportionately less than the increase in revenue.

The figures are as follows :—

	Rs.
Revenue, second period of seven years	177,993,992
Revenue, first period of seven years	126,520,612
Increase of Revenue in later period	51,473,380

	Rs.
Expenditure, second period of seven years	168,227,487
Expenditure, first period of seven years	126,199,623
Increase of Expenditure in later period	42,027,864

Dealing with 1902 as compared with 1895, we find the increase in revenue to be Rs. 6,215,248, or 30 per cent., while the increase in expenditure amounts to Rs. 5,190,259, or 25 per cent.

Coming now to a consideration of the figures appearing in "D" under the different heads, it will not be necessary to discuss items which show an increase of less than 25 per cent.

Public Debt.—With reference to the Public Debt it is worthy of notice that notwithstanding the new loan raised in January, 1902, charges on which became payable in 1902, there has been a slight decrease on the total expenditure. This is due to improvement in the rate of exchange and of the reduction of the amount due on some of the old loans in the period under review.

Pensions.—This is due to certain new, and it will be generally admitted wise, provisions. Formerly no one who drew a salary of under Rs. 250 per annum was entitled to either pension or gratuity. The consequence was that many men, who had served Government faithfully for thirty or forty years in a subordinate capacity, were, when they became too old to perform their duties, discharged without any provision for their maintenance during the remaining years of their lives. This not only amounted to a public scandal, but induced officers to make every attempt to retain such employés even after they had ceased to be efficient; sinecures were found for them, or practically no work was exacted. In some cases the retired employés were given charitable allowances, thus, to some extent, exhausting a fund which is hardly large enough for its legitimate purposes. The rule now is that all Government servants, however subordinate the capacity in which they may be employed, even daily-paid coolies, are, after a service of twenty-five years, entitled to a pension or gratuity. Among larger and more costly schemes of reform this has been lost sight of, but there is probably no measure which has given an equal amount of well-earned relief to the deserving.

His Excellency the Governor.—The increase under this head is plainly due to an accidentally diminished expenditure in 1895, rather than to a subsequent increase.

Civil Service.—The head "Civil Service" is new, but involves little increase of expenditure. It is due to the re-organization of the Service. Each member now draws his salary, according to his class, direct from the Treasurer; he does not, as formerly, draw it with the pay of the establishment over which he presides.

Secretariat.—The Staff of the Secretariat has been increased by the following :—

Additional Assistant Colonial Secretary	Rs. 7,000 to 9,000
Archivist	„ 4,200
Inspector of Mines	„ 7,200
Veterinary Surgeon*	„ 5,000 to 7,000

I think that no one who knows the amount of work to be got through in that office will question the necessity for the additional assistant.

* Also transferred to this department.

Audit and Treasury.—The decrease in the Audit Office and Treasury are due to the fact that the salaries of the Auditor-General and Treasurer are included under the new head "Civil Service." To the same cause is due the diminution in Provincial Administration.

Surveys.—The first substantial increase is under the head "Survey Department."

The annexed return will, I think, show that, waiving altogether the numerous incidental advantages obtained by extending our survey operations, the public has obtained tangible results far more than commensurate with the additional cost.

Statement No. 1.

Year.	Surveyors.			Acres Surveyed.	Land sold. Acres.	Office Staff.	Issue of Preliminary Plans.		Issue of Title Plans.		Survey Fees recovered.
	Superintendents.	Assistant Superintendents.	Surveyors.				No.	Acres.	Triplicate Copies. No.	Acres.	
											Rs. c.
1895	6	15	50	78,052	21,758	72	860	35,869	3,699	19,289	59,480 80
1896	6	15	50	45,438	19,389	72	663	94,126	3,856	19,338	52,843 31
1897	7	14	66	296,487	22,446	72	1,213	130,489	2,516	21,698	59,203 5
1898	7	14	89	1,255,004	20,538	72	434	54,115	4,132	23,762	60,624 84
1899	7	13	110	2,372,450	24,817	82	988	103,080	5,150	23,971	72,309 92
1900	7	13	112	2,885.845	35,906	81	826	143,143	5,236	20,705	64,816 19
1901	7	12	112	2,081,904	24,102	87	1,685	83,049	5,863	29,265	70,076 90
1902	7	12	112	2,208,751	28,117	87	1,772	133,418	6,650	33,952	90,163 48

It will be noticed that, while the total expenditure has only increased by forty-seven per cent., the number of surveyors has been more than doubled, and the extent of land surveyed in 1902 was more than twenty-eight times as great as that dealt with in 1895, while nearly double the amount of land has been sold. The office staff has only increased by about 20 per cent., while the number of preliminary plans issued has more than doubled, and the acreage appearing in those plans has increased four-fold. The number of acres included in title plans and the number of such plans issued have both doubled. The recoveries from survey fees have increased, as will be seen in the last column, from Rs. 59,480 to Rs. 90,163. It can therefore hardly be denied that for the increase in the expenditure under this head the public has had full value.

Port and Marine.—The increase from Rs. 207,361·71 to Rs. 330,712·55 in "Port and Marine Department" is due partly to the employment of a larger number of pilots and the payment of increased salaries consequent on the withdrawal of night fees. Plague precautions also necessitated large additional expenditure on Police. The charge for special trains for coolies has also risen from Rs. 8,000 in 1895 to Rs. 30,000 in 1902. This increase is mainly due to the closing of the Northern route, as all coolies now come by Colombo.

Botanic Gardens.—The increase from Rs. 49,446 to Rs. 72,246 under the head "Botanic Gardens" is due to the engagement of additional scientific officers:—

	Rs.
Mycologist and Assistant Director	5,000
Entomologist	5.000
Skilled Assistant	2,000
Retaining fee, Analyst	3,000

Judicial.—The addition of the fourth Supreme Court Judge with his staff has caused increased expenditure. The circuit and incidental expenses are much higher; the exact figures for 1902 are not yet available, but a comparison between 1895 and 1901 gives roughly the following figures:—

	Salaries.	Circuit and other Expenses.
	Rs.	Rs.
1895	91,000	... 20,000
1901	116,000	... 37,000

Police and Prisons.—The increase under the head "Police and Prisons" is not more than might be expected from the natural and inevitable enlargement of those departments.

Medical Department.—The increase in the Medical Department and hospitals and dispensaries is fully explained by the expansion of the work done, as is shown in the annexed table. It will be seen that while the expenditure has increased by 22 per cent. the number of persons treated in hospitals and dispensaries has risen from 792,840 to 1,041,615, an increase of 31 per cent., while the attendance at dispensaries and daily average in hospitals show also a large increase.

Statement No. 2.

Year.	Hospitals.	Asylums.	Lunatic Asylum.			Wards.	Beds.	Government Dispensaries.	Estate Dispensaries.	Doctors.	Dispensers.	Nurses.	Amount spent on Drugs.	Persons treated.		Attendance at Dispensaries.	Daily Average of Sick in Hospitals.	Reimbursements made by Payments for Work done.
			Dormitories.	Day Rooms.	Single Rooms.									In Hospitals.	In Dispensaries (excluding Estate Dispensaries).			
													Rs. c.					Rs.
1895 ...	63	2	18	19	101	391	3,347	211	50	106	181	34	179,122 19	48,475	744,365	1,181,501	2,720·63	245,460
1896 ...	63	2	18	19	101	402	3,479	213	66	122	194	48	179,227 98	46,013	682,806	1,077,731	2,697·71	252,792
1897 ...	63	2	18	19	101	404	3,469	219	84	128	210	61	180,907 87	48,105	682,611	1,114,573	2,831·00	240,416
1898 ...	64	2	18	19	101	417	3,561	242	94	128	225	70	158,072 74	53,564	793.403	1,279.729	3,152·35	277,418
1899 ...	64	2	18	19	101	432	3,728	246	102	134	235	102	268,740 56	54,705	899,430	1,458.926	3,157·55	309,442
1900 ...	63	2	18	19	116	426	3,763	251	111	136	248	103	238.022 92	63.0 0	821.174	1,358,956	3,455·15	331,789
1901 ...	66	2	18	20	133	445	3.892	271	117	133	252	88	200,912 39	66,410	876,119	1,376,523	3,514·36	327,778
1902 ...	67	2	18	20	134	454	3,940	314	117	132	252	89	154,407 75	66,455	975,160	1,499,227	3,402·40	337,823

In addition to this the reimbursements, money paid to the department for services rendered, show an increase from Rs. 245,460 to Rs. 337,823, amounting to 37 per cent.

It must be borne in mind that in this Colony the amount contributed by Government for the relief of the poor, when compared with the population and revenue of the Island, may be called insignificant. It is highly creditable to the people that among a poor population, many of whom are living on the verge of want, it has not been necessary to provide poor-houses; the claims of humanity are so widely recognized and so freely met that even the pauper can always obtain shelter and a meal. It will probably be admitted that of all forms of charitable relief the free treatment of the sick is the best. Such contributions cannot be squandered on the idle or the undeserving, because the expenditure is only incurred in cases of actual sickness, and the suffering must, speaking generally, be the deserving, or at least those deserving of relief. It is also to be noticed that money devoted to this purpose does not compete with private charity, because the assistance afforded can in very few instances be provided by the benevolence of individuals. Were the expenditure even greater than it is, the community generally would obtain more than corresponding advantage.

Registration.—There is a very large increase, amounting to 54 per cent., under this head. This is partially due to increase of population and partly to the better enforcement of registration under the provisions of Ordinance No. 2 of 1895. The figures are as follows :—

	1895.	1902.	Percentage of Increase.
Births registered ...	101,480	141,893	40
Deaths registered ...	88,301	99,680	10
General Marriages ...	13,890	21,364	54

Some additional expenditure was also incurred by the introduction of a system of appointing regular medical practitioners as registrars in the large towns, as these officers had to receive special salaries. The practice of paying headmen for reporting births or deaths has also been introduced. This is found to be a great check in the accuracy of registration. On the whole, it seems pretty certain that the increased expenditure has produced more than a proportionate increase in efficiency.

Fiscals.—The increase under the head "Fiscals" is large, 31 per cent., and this is entirely attributable to additional expenditure under two sub-heads :—

	1895. Rs.	1902. Rs.
Batta to Jurors and Witnesses ...	18,123	51,070
Execution of Civil and Criminal Processes ...	8,681	20,812

An examination of this expenditure by provinces shows that the increase is almost universal. The only reason that can be assigned is that the amount of legal work done, both Civil and Criminal, is greater than it used to be ; Criminal sessions now last longer, and a higher rate of batta for witnesses and jurors was sanctioned by Government in 1900 and 1901.

The total increase under "Fiscals" amounts to Rs. 54,939, of which Rs. 45,078 is due to the above sub-heads.

Education.—The increase under the head "Education" amounts to 49 per cent., but the annexed Table No. 3 will show that results proportionate to the enhanced expenditure have been attained.

As will be seen by the annexed table, the number of pupils has risen by 41 per cent., from 134,481 in 1895 to 189,403 in 1902.

Statement No. 3.

Year.	Number of Schools.		Total.	Number of Pupils.				Number of School Masters (in Government Schools only).*	Number of School Mistresses (in Government Schools only).*	Amounts paid as Grant-in-aid.
	Government.	Grant-in-aid.		Government.		Grant-in-aid.				
				Male.	Female.	Male.	Female.			
1895 ...	477	1,096	1,573	37,552	6,700	61,843	28,386	546	91	254,333
1896 ...	474	1,130	1,604	37,825	6,713	65,581	28,819	538	93	285,608
1897 ...	474	1,172	1,646	37,883	7,230	71,250	31,235	527	97	313,896
1898 ...	479	1,220	1,699	38,828	7,451	71,462	32,489	514	102	338,568
1899 ...	489	1,263	1,752	39,677	7,852	76,006	35,139	536	95	357,284
1900 ...	500	1,328	1,828	40,432	8,210	82,644	38,107	535	118	386,710
1901 ...	503	1,407	1,910	44,275	9,559	88,811	40,616	561	112	421,673
1902 ...	515	1,424	1,939	48,570	10,942	88,908	40,983	555	119	441,780

* No record is kept of teachers employed in aided schools.

The main cause of the increased cost of the department is the much larger amounts which have now to be paid for grants-in-aid. The last column of the statement shows that, while Rs. 254,333 was the sum required in 1895, Rs. 441,779 was distributed under this head in 1902. The total increase in the expenditure of the department amounts to Rs. 316,009, and of this, as will be seen by the table given above, Rs. 187,446 is attributable to additions to the sums paid as grant-in-aid. This only leaves a sum of Rs. 128,563 to be accounted for, and of this about Rs. 40,000 is annually expended on the Technical School, which was established in 1893.

Transport.—The increase under the head "Transport" is apparently accidental, and is due to increased payments on account of passage money paid for officers returning to or coming from England.

Exchange.—The decrease in "Exchange" can be accounted for by the fact that the rate is now fixed.

Military Expenditure.—The increase under the head "Military Expenditure." is inevitable as long as the revenue continues to expand, the agreement with the Imperial Government being that this Colony is to contribute 9½ per cent. on its revenue.

Miscellaneous Services.—The very large sum expended on "Miscellaneous Services," when compared either with 1895 or 1902, can be explained by the following items of extraordinary expenditure which were incurred in 1902 :—

	Rs.
Expenses connected with Census	30,500
Contribution to the Memorial to Her late Majesty	75,000
Expenses in connection with the Coronation of His Majesty the King ...	136,570
Purchase of Gangaroowa Estate	132,520
Total ...	374,590

This sum is more than sufficient to account for the difference between the figures for 1901 and 1902. When comparing the latter sum with the expenditure of 1895, the following items must be added :—

	Rs.
Plague Precautions (an entirely new item)	150,000
Interest on Widows' and Orphans' Pension Fund	94,000

In addition to this, the amount payable to Municipalities and Local Boards has largely increased, mainly on account of the operation of Ordinance No. 2 of 1901, and of the increased assistance which is given to local bodies. The figures are: Refund of Stamp duties, 1895, Rs. 117,101; 1901, Rs. 158,238.

Government Stores.—The increase under the head "Government Stores" is due to accidentally low payments in 1895. It will be seen that the sum expended in 1902 is lower than that for either 1896, 1897, 1900, or 1901. There has, in fact, been no material increase at all.

Forests.—The decrease in the Forest Department is not due to an actual diminution in expenditure, but to an alteration in the system of accounts. The work is now principally done on the advance system, by which the cost of felling and transport does not appear either on the revenue or expenditure side of the general accounts of the Colony.

Post Office and Telegraphs.—It is naturally to be expected that in a Colony which is advancing with such rapidity there should be a considerable increase under the head "Post Office and Telegraphs." The advance in revenue derived from this source, however, shows proportionately a considerably greater advance than the expenditure. While the latter gives an increase of 38 per cent., the former has risen from Rs. 688,500 to Rs. 1,110,785, or 64 per cent. The additional outlay has therefore proved a good investment, besides producing results beneficial to the Colony generally.

Railway Department.—The Railway Department shows an increase of 57 per cent., but there has been a considerable increase in the number of miles worked, 297 in 1895 against 368 in 1902. The cost of upkeep of the permanent way is also rising considerably; for some time after a new railway has been taken over little has to be spent on repairs or renewals, but as time goes on the original work has to be renewed, and the expense of maintaining the line increases.

Public Works.—Taking the three items into which the Public Works is divided, there is an increase compared with 1895 of Rs. 584,848, or about 18 per cent. Considering the amount of work thrown on the department this addition to its expenditure cannot be regarded as excessive.

Irrigation and Waste Lands Department.—The Irrigation and Waste Lands Department have been recently established, and there cannot, therefore, be any comparison with 1895.

Expenditure from Surplus Funds.—The last three columns on the return show the expenditure out of Surplus Funds. This expenditure previous to 1900 would have been met entirely out of loans, but owing to the flourishing state of the finances of the Colony, it is now found practicable to devote these large sums to irrigation and railways, which are thus only partially paid for with borrowed capital. Government is thus not only meeting all its current liabilities, but is also spending large sums on works the whole cost of which might reasonably have been borne by posterity.

Extraordinary Contingencies.—Large sums have during the last three years been expended on account of what may be called extraordinary contingencies.

The following payments were made :—

In 1900—	Rs.
Contingent to South Africa	149,651
Paris Exhibition	169,739
Indian Famine Fund	75,000
Total ...	394,390

In 1901—	Rs.
Royal Visit	148,037
Census	116,096
Total ...	264,133

In 1902—	Rs.
Contribution to Imperial Memorial	75,000
Coronation of His Majesty the King	136,570
Purchase of Gangaroowa Estate	132,520
Census	19,025
Preparation for Pearl Fishery	42,000
Total ...	405,115

COST OF ADMINISTRATION.

Statements F and G in the appendix show the comparative cost of administration in the years 1895 and 1902, and also the comparative strength of the various departments.

NEW OFFICES CREATED SINCE 1896.

Annexed is a list of offices created since January, 1896, carrying a salary of Rs. 3,000 and upwards. Although the total amount seems considerable, a careful scrutiny will show that the expenditure was rendered absolutely necessary by the rapid progress made by the Colony in all Departments.

List of Offices created since 1st January, 1896, carrying a Salary of Rs. 3,000 and upwards.

	Rs.
Additional Assistant Colonial Secretary	7,000
Archivist and Librarian attached to Secretariat	4,200
Inspector of Mines	7,200
Additional Landing Surveyor, Customs, Colombo	3,200
Correspondence Clerk, Customs	3,000
Four Pilots at Rs. 3,600 each	14,400
Third Puisne Justice	18,000
Third Deputy Registrar	3,000
Registrar, Medical College	6,000
Accountant, Post Office	5,000*
Assistant Accountant, Post Office	4,000†
Inspector of Post Offices	3,000
Assistant Superintendent, Telegraph Department	4,000
Supernumerary District Engineer	3,000
Superintendent of Works, Public Works Department	4,000
Chief Draughtsman, Public Works Department	5,000
Instructor of Electrical Engineering and Telegraphy, Technical College	4,500‡
Instructor in Drawing, Technical College	4,200
Instructor in Civil and Mechanical Engineering, Technical College	4,200
Lecturer in Modern Languages, Royal College	5,000
Superintendent, Ragama Cooly Camp	3,500
Itinerating Police Magistrate, Negombo and Kalutara	3,000
Mycologist and Assistant Director, Botanical Gardens	5,000
Entomologist	5,000
Special Officer, Waste Lands Ordinance	8,000
Director of Irrigation	12,000
Seven Irrigation Engineers at Rs. 4,000 each	28,000
Five Irrigation Engineers at Rs. 3,000 each	15,000
One Chief Irrigation Inspector	3,360
Four Chief Irrigation Inspectors at Rs. 3,000 each	12,000
Assistant Accountant, Railway	3,600
Inspector of Signals	4,000
Locomotive Foreman	3,000
Locomotive Foreman, Nawalapitiya	3,000
Foreman Boiler Maker	3,000
Foreman Painter	3,000
Travelling Inspector	3,450
Total	229,810

* Rising to Rs. 8,000 by annual increments of Rs. 500.
† Rising to Rs. 5,000 by annual increments of Rs. 200.
‡ Rising to Rs. 6,000.

PUBLIC DEBT.

The total sums raised by the Colony on loan may be summed up as follows :—

£			
460,000	Ordinance	No. 1 of 1876	Harbour Improvement.
	do.	No. 19 of 1884	
	do.	No. 3 of 1885	
250,000	do.	No. 6 of 1875	do.
275,000	do.	Nos. 8 and 12 of 1877	Railways.
	do.	No. 19 of 1884	Railways.
1,000,000	do.	No. 9 of 1878	do.
	do.	No. 19 of 1884	
331,000	do.	No. 7 of 1899	Waterworks.
	do.	No. 4 of 1885	
450,000	do.	No. 7 of 1888	Railways.
1,000,000	do.	No. 17 of 1893	Harbour, Railways, and other public works.
1,400,000	do.	No. 14 of 1900	do. do. do.
£5,166,000			

Rs.			
365,000	Ordinance	No. 1 of 1887	Irrigation.
3,000,000	do.	Nos. 7 and 8 of 1892	Railways, Harbour, and Irrigation.
Rs. 3,365,000			

Converting this into sterling at 1s. $4\frac{1}{16}d.$, the amount would be £225,209, and this added to the sterling loans would give a total sum of £5,391,209.

These sums have, roughly speaking, been appropriated as follows :—

Sterling Loans :—	£
Harbour Works	1,909,755
Railways	2,709,822
Waterworks	369,918
Irrigation	176,505
Total	5,166,000

Rupee Loans :—

	Rs.
Irrigation	365,000
Railways	2,466,556
Harbour Works	533,444
Total ...	3,365,000

On the 31st December, 1902, there had been repaid out of the sterling loans a sum of £403,192, leaving still to be paid £4,762,808.

Out of the rupee loans there had been paid Rs. 154,493, leaving Rs. 3,210,507 due.

Converting these sums at 1*s.* $4\frac{1}{16}$*d.*, the total amount due would be—

In pounds sterling	£4,977,678
In rupees	Rs. 74,374,642

These sums may roughly be appropriated as follows :—

	Sterling. £	Rs.
Harbour Works	1,715,465 ...	25,631,833
Railway Construction	2,726,000 ...	40,730,901
Waterworks	345,617 ...	5,164,083
Irrigation	190,596 ...	2,847,825
Total ...	4,977,678	74,374,642

The total annual cost in interest and sinking fund to the Colony will amount to Rs. 3,653,097, and until repayment causes diminution (see table below).

Dealing with the Public Debt during the period of His Excellency's administration, we find that on 1st January, 1896, the amount due was Rs. 63,738,853. This, however, was diminished by payments until on 1st January, 1902, the Public Debt was represented by a sum of Rs. 54,003,817. The loan raised in 1902 again increased this figure, and on 1st January, 1903, the liability of the Colony amounted to a sum of Rs. 74,374,642.

It would thus appear that, though a loan of £1,400,000 has been raised since 1895, the Public Debt has only increased by Rs. 10,635,789.

During the same period a sum of Rs. 2,417,855 was deposited to the credit of the sinking fund for the redemption of the inscribed stock under Ordinances Nos. 19 of 1884, 7 of 1888, and 17 of 1893, and has been invested in Indian securities.

The sums repaid to loans since 1895 thus amount to—

	Rs.
Actual repayment	9,735,036
Sinking Fund	2,417,855
Total ...	12,152,891

To this may fairly be added the amounts expended on railways and irrigation out of general revenue, as these, though not an actual repayment, represented sums which must have been borrowed had the money not been provided out of current revenue.

These items are as follows (see statement D) :—

	Rs.
1900	3,626,939
1901	3,320,152
1902	1,700,226
Total ...	8,647,317

Adding this to the repayments given above, we find that a total sum of Rs. 8,647,317 + Rs. 12,152,891 = Rs. 20,800,208 was during the period under consideration contributed out of the revenue to the construction of permanent works, mainly for the benefit of posterity.

The debt due by the Colony on 1st January, 1903, viz., Rs. 74,374,642, will be extinguished as follows :—

Amount. Rs.	Date of Payment.	Saving consequent on Repayment. Rs.
1,479,341	1911	203,132
210,507	1913	25,000
27,101,136	1934	1,564,965
21,665,370	1940	870,000
3,000,000	1944	150,000
20,918,288	1948	840,000

It will thus be seen that very many persons who are now twenty years of age and under will live to see the final repayment of all sums now owed by the Colony, while they will probably within the next five years enjoy the advantages which the great works now in course of completion must confer upon the Island.

The surplus funds on 1st January, 1903, amounted to Rs. 876,077, and if to this be added the sum of Rs. 1,237,101 which remained unexpended out of former loans, the total sum available for distribution on the above debt amounts to Rs. 2,113,178.

In addition to this, the revenue is still rising; the amount collected in the first quarter (excluding Pearl Fishery receipts, which will come to about Rs. 827,278) exceeded that of the first quarter of 1902 by Rs. 943,678.

On the 2nd May, 1903, the cash balances* of Government in the banks at Colombo and at the outstations amounted to Rs. 4,404,784, exclusive of the currency note reserve of Rs. 6,552,810 and the cash on account of the one-twelfth advances in the hands of Heads of Departments. Besides these cash balances, Government held on the above date Indian and other securities to the value of Rs. 5,979,710, while the investments on account of the currency note reserve amounted to Rs. 5,951,140.

The accompanying statement E gives approximately the revenue and indebtedness of various Crown colonies.

It is to be noted that of the objects on which these loans have been expended, viz., Harbour Improvements, Railways, and Irrigation, the two former are directly, and the last indirectly, remunerative.

In 1902 the railway revenue amounted to Rs. 7,975,506, and after meeting the working expenses, sinking fund, and interest charges on the railway debt, there was a balance of Rs. 1,235,738, which could be devoted to the payment of interest due on loans raised for purposes other than railways.

The total annual amount due by the Colony for interest and sinking fund on loans is Rs. 3,653,097, out of which is due for railway loans Rs. 1,832,667. Out of the balance of Rs. 1,820,430 a sum of Rs. 1,235,738 has, as shown above, been paid from railway profits, leaving only Rs. 584,692 to be met from general revenue. If the new railway extensions are only moderately successful, they will produce a surplus sufficient to meet this small deficit, and practically relieve the revenue of the whole burden of the loans, both immediately and ultimately. The increased accommodation which will be provided by the completion of the Northern Arm cannot fail to produce an enhanced revenue from that source also, while the increased price of land and the advance of general prosperity among the people will soon place irrigation expenditure among the most remunerative of our investments.

Taking all these matters into consideration, it is not surprising that the credit of the Colony stands high, as is clearly shown by the following :—

Price of 3 per cent. Ceylon Inscribed Stock is 97¼; Australia, 93; Natal, 93¼; Trinidad, 92½; British Guiana, 91¼; Jamaica, 91.

Audit Office,
Colombo, July 7, 1903.

F. R. ELLIS,
Auditor-General.

APPENDIX.

A.—Comparative Statement of the Revenue and Expenditure of Ceylon, showing the Two Septennial Periods 1889–1895 and 1896–1902.

1	2 Revenue.	3 Expenditure.	4 Excess of Revenue as compared with previous Year.	5 Deficiency of Revenue as compared with previous Year.	6 Surplus of Revenue over Expenditure.	7 Excess of Expenditure over Revenue.	8
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1889 ...	15,299,877	14,987,312		108,935	312,565	—	—
1890 ...	16,228,769	15,499,509	928,892	—	729,260	—	—
1891 ...	17,962,710	16,772,392	1,733,941	—	1,190,318	—	—
1892 ...	18,509,187	18,392,999	546,477	—	116,188	—	—
1893 ...	18,051,950	18,763,492	—	457,237	—	711,542	—
1894 ...	19,485,311	20,632,301	1,433,361	—	—	1,146,990	—
1895 ...	20,982,808	21,151,618	1,497,497	—	—	168,810	—
Total ...	126,520,612	126,199,623	—	—	2,348,331	2,027,342	Increase of Revenue over that of 1895.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1896 ...	21,974,573	21,237,859	991,765	—	736,714	—	991,765
1897 ...	24,006,521	21,634,377	2,031,948	—	2,372,144	—	3,023,713
1898 ...	25,138,669	22,843,851	1,132,148	—	2,294,818	—	4,155,861
1899 ...	25,913,141	24,950,940	774,472	—	962,201	—	4,930,333
1900 ...	27,325,930	25,321,988	1,412,789	—	2,003,942	—	6,343,122
1901 ...	26,437,102	25,896,594	—	888,828	540,508	—	5,454,294
1902 ...	27,198,056	26,341,878	760,954	—	856,178	—	6,215,248
Total ...	177,993,992	168,227,487	—	—	9,766,505	—	—

* It must be noted that these amounts include deposits which are not the property of Government. It would take a long time to eliminate them, and as the total amount varies daily, it would not be worth while to do this.

B.—Revenue of each Year compared with that of 1895 and of last preceding Year.

Heads of Revenue.	Revenue, 1895.	Revenue, 1896.	1896 as compared with 1895.		Revenue, 1897.	1897 as compared with 1895.		1897 as compared with 1896.		Revenue, 1898.	1898 as compared with 1895.		1898 as compared with 1897.		Revenue, 1899.	1899 as compared with 1895.	
			Excess.	Deficit.		Excess.	Deficit.	Excess.	Deficit.		Excess.	Deficit.	Excess.	Deficit.		Excess.	Deficit.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Customs ...	5,481,595	5,261,309	—	220,286	5,973,785	492,190	—	712,476	—	6,395,442	913,847	—	421,657	—	6,752,367	1,270,772	—
Port and Harbour Dues ...	887,304	939,894	52,590	—	971,429	84,125	—	31,535	—	1,099,205	211,901	—	127,776	—	1,135,101	247,797	—
Licenses, Excise:																	
Salt ...	1,003,704	999,801	—	3,903	1,077,384	73,680	—	77,583	—	1,079,852	76,148	—	2,468	—	1,091,798	88,094	—
Arrack, Rum, and Toddy ...	2,479,539	2,487,769	8,230	—	2,812,324	332,785	—	324,555	—	2,961,588	482,049	—	149,264	—	3,112,324	632,785	—
Miscellaneous ...	1,304,209	1,559,690	255,481	—	1,567,209	263,000	—	7,519	—	1,487,089	182,880	—	—	80,120	1,426,650	122,441	—
Fees of Court, &c. ...	1,409,104	1,424,607	15,503	—	1,499,559	90,455	—	74,952	—	1,526,037	116,933	—	26,478	—	1,642,617	233,513	—
Post and Telegraphs ...	688,500	769,477	80,977	—	827,802	139,302	—	58,325	—	955,885	267,385	—	128,083	—	906,326	217,826	—
Government Railway ...	6,222,736	6,777,437	554,701	—	7,318,683	1,095,947	—	541,246	—	7,558,611	1,335,875	—	239,928	—	7,626,889	1,404,153	—
Rent of Government Property ...	103,964	99,086	—	4,878	99,018	—	4,946	—	68	133,664	29,700	—	34,646	—	119,321	15,357	—
Interest	355,996	478,772	122,776	—	539,892	183,896	—	61,120	—	630,268	274,272	—	90,376	—	488,930	132,934	—
Miscellaneous Receipts ...	161,433	242,510	81,077	—	308,633	147,200	—	66,123	—	171,701	10,268	—	—	136,932	266,253	104,820	—
Sale of Government Property ...	455,530	488,893	33,363	—	511,833	56,303	—	22,940	—	528,378	72,848	—	16,545	—	517,863	62,333	—
Land Sales	429,194	445,328	16,134	—	498,970	69,776	—	53,642	—	610,949	181,755	—	111,979	—	826,702	397,508	—
Total ...	20,982,808	21,974,573	1,220,832	229,067	24,006,521	3,028,659	4,946	2,032,016	68	25,138,669	4,155,861	—	1,349,200	217,052	25,913,141	4,930,333	—

Heads of Revenue.	1899 as compared with 1898.		Revenue, 1900.	1900 as compared with 1895.		1900 as compared with 1899.		Revenue, 1901.	1901 as compared with 1895.		1901 as compared with 1900.		Revenue, 1902.	1902 as compared with 1895.		1902 as compared with 1901.		Increase and Decrease per cent. as compared with 1895.	
	Excess.	Deficit.		Excess.	Deficit.	Excess.	Deficit.		Excess.	Deficit.	Excess.	Deficit.		Excess.	Deficit.	Excess.	Deficit.	Increase.	Decrease.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
Customs ...	356,925	—	7,228,293	1,746,698	—	475,926	—	7,010,187	1,528,592	—	—	218,106	7,181,272	1,699,677	—	171,085	—	31	—
Port and Harbour Dues ...	35,896	—	1,319,378	432,074	—	184,277	—	1,331,218	443,914	—	11,840	—	1,299,728	412,424	—	—	31,490	46	—
Licenses, Excise:																			
Salt ...	11,946	—	1,106,568	102,864	—	14,770	—	1,137,863	134,159	—	31,295	—	1,186,069	182,365	—	48,206	—	18	—
Arrack, Rum, and Toddy ...	150,736	—	3,233,573	754,034	—	121,249	—	3,185,694	706,155	—	—	47,879	3,378,219	898,680	—	192,525	—	36	—
Miscellaneous ...	—	60,439	1,455,867	151,658	—	29,217	—	1,535,398	231,189	—	79,531	—	1,493,460	189,251	—	—	41,938	15	—
Fees of Court, &c. ...	116,580	—	1,723,489	314,385	—	80,872	—	1,745,242	336,138	—	21,753	—	1,837,649	428,545	—	92,407	—	30	—
Post and Telegraphs ...	—	49,559	996,803	308,303	—	90,477	—	980,974	292,474	—	—	15,829	1,110,785	422,285	—	129,811	—	61	—
Government Railway ...	68,278	—	8,239,679	2,016,943	—	612,790	—	7,967,692	1,744,956	—	—	271,987	7,977,590	1,754,854	—	9,898	—	28	—
Rent of Government Property ...	—	14,343	102,900	—	1,064	—	16,421	114,548	10,584	—	11,648	—	126,891	22,927	—	12,343	—	22	—
Interest	—	141,338	486,451	130,455	—	—	2,479	426,356	70,360	—	—	60,095	503,347	147,351	—	76,991	—	41	—
Miscellaneous Receipts ...	94,552	—	209,189	47,756	—	—	57,064	78,598	—	82,835	—	130,591	90,888	—	70,545	12,290	—	—	44
Sale of Government Property ...	—	10,515	404,944	—	50,586	—	112,919	366,055	—	89,475	—	38,889	329,675	—	125,855	—	36,380	—	28
Land Sales ...	215,753	—	818,796	389,602	—	—	7,906	557,277	128,083	—	—	261,519	682,483	253,289	—	125,206	—	59	—
Total ...	1,050,666	276,194	27,325,930	6,394,772	51,650	1,609,578	196,789	26,437,102	5,626,604	172310	156067	1,044,895	27,198,056	6,411,548	196,400	870,762	109808	30	—

C.—Comparative (Detailed) Statement of the Revenue of the Colony of Ceylon for the Years 1895 to 1902.

Heads of Revenue.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
1.—Customs.								
Imports.								
Grain	2,837,700 90	2,464,438 28	2,748,736 83	2,911,653 4	2,933,075 70	3,014,493 36	2,905,487 89	2,862,292 18
Cotton Manufactures	287,085 91	314,354 40	343,154 66	336,740 39	278,744 77	304,907 80	249,500 79	262,962 22
Spirits and Cordials	500,590 33	549,947 41	622,994 0	684,470 72	795,052 93	871,925 7	900,637 84	951,023 75
Sugar	306,685 20	282,531 83	348,635 47	375,402 25	461,281 13	546,512 64	507,848 69	598,595 50
Kerosine Oil	196,560 45	396,945 76	441,928 90	505,982 80	503,015 42	548,374 54	639,228 89	649,611 29
Other Goods	1,237,875 81	1,134,817 68	1,350,724 48	1,389,323 86	1,527,210 9	1,760,196 96	1,624,127 43	1,644,880 25
Undervalued Goods	1,897 80	1,827 79	446 77	398 78	60 0	1,374 11	448 93	729 13
Sundries	1,090 11	1,127 5	2,085 80	2,738 39	6,826 80	2,814 61	956 0	816 3
Exports.								
Plumbago	81,689 57	90,266 39	95,145 37	119,542 50	159,166 14	98,067 25	112,161 23	125,946 54
Hides and Horns	23,087 47	16,158 7	14,264 96	18,972 21	19,692 67	21,592 50	19,406 77	17,345 53
Elephants	2,400 0	5,800 0	1,400 0	600 0	1,800 0	1,000 0	1,400 0	3,000 0
Chanks	4,931 99	3,090 18	4,267 18	4,010 14	2,585 27	7,615 28	5,522 79	4,820 86
Cinchona	—	4 45	—	—	—	—	—	—
Arrack	—	—	—	45,596 69	63,856 27	49,419 22	43,460 63	59,249 39
Undervalued Goods	—	—	—	10 47	—	—	—	—
	5,481,595 54	5,261,309 29	5,973,785 4	6,395,442 24	6,752,367 19	7,228,293 34	7,010,187 88	7,181,272 67
2.—Port, Harbour, Wharf, and Lighthouse Dues.								
Colombo Harbour Dues	779,255 90	833,669 78	875,900 89	983,738 20	1,017,760 32	1,157,101 4	1,147,612 77	1,107,913 72
Port Dues at Outports	42,906 11	38,408 20	32,311 10	36,564 47	35,409 12	36,693 25	41,591 49	42,073 92
Pilotage	64,591 25	67,337 50	62,854 32	78,470 0	81,521 25	125,178 50	141,587 50	149,290 0
Sundries	550 50	478 50	363 0	432 0	410 25	405 0	426 0	—
	887,303 76	939,893 98	971,429 31	1,099,204 67	1,135,100 94	1,319,377 79	1,331,217 76	1,299,727 64
3.—Licenses, Excise, and Internal Revenue not otherwise classified.								
Excise.								
Salt	1,003,704 4	999,801 50	1,077,384 52	1,079,852 81	1,091,798 47	1,106,568 65	1,137,863 7	1,186,069 54
Arrack, Rum, and Toddy	2,479,539 65	2,487,769 75	2,812,324 55	2,961,588 76	3,112,324 64	3,233,573 74	3,185,694 94	3,378,219 39
Licenses.								
Opium	2,300 0	2,400 0	1,700 0	3,100 0	5,640 0	8,380 0	17,415 0	21,205 0
Stamp Duty on Professional and Trading Licenses	7 0	—	—	25 0	—	—	—	—
Licenses to dig Plumbago	171 0	—	30 0	80 0	10 0	—	4,120 81	637 60
Sundries	1,139 67	140 0	243 0	660 15	638 0	698 0	415 3	3,004 7
Rents exclusive of Lands.								
Road, Bridge, Ferry, and Canal Tolls ...	338,599 16	348,203 16	385,248 8	375,236 86	388,908 90	412,637 87	416,893 52	410,038 30

Land Revenue.								
Paddy	2,690 94	2,214 37	951 37	2,425 90	764 85	1,825 53	3,447 87	1,424 41
Tithes redeemed	14,046 35	12,768 19	2,592 81	213 42	55 70	3,336 58	138 22	19 60
Royalty on Cabook and Coral Stones ...	53 50	103 15	144 90	206 50	627 66	349 78	499 47	208 83
One-tenth Lease of Plumbago Lands ...	—	—	7,000 0	7,200 0	1,030 0	—	—	—
Incidental	13,317 10	600 1	534 6	276 50	298 82	547 15	565 26	2,132 60
Stamps.								
Revenue (various services)	792,557 62	1,037,431 82½	995,533 65	913,216 77	853,036 55	852,257 32	902,189 3	865,615 72
Composition Duty on Bank Cheques ...	32,491 28	32,582 76	35,585 93	36,273 37	36,818 42	39,811 83	41,232 99	42,448 54
Fines and Forfeitures.								
Supreme Court	445 0	1,119 96	1,489 9	1,470 0	860 0	1,361 0	1,967 50	365 0
District Courts	2,748 89	3,573 50	8,239 24	8,015 2	6,168 25	6,861 22	4,561 87	6,002 81
Courts of Requests	24 50	157 51	430 25	299 50	521 38	431 50	338 75	375 10
Police Courts	80,372 98	87,655 80	97,851 35	106,407 91	99,784 4	102,961 26	102,668 9	99,331 48
Government Agents	1,277 51	5,139 2	4,137 13	6,325 56	6,077 16	1,179 13	2,661 11	2,752 93
Other Departments	16,488 98	19,281 92	20,160 66	19,790 4	15,275 3	14,979 75	22,102 97	15,767 74
Forest Offences...	5,476 87	6,318 42	5,346 28	5,865 77	10,134 54	8,248 54	14,179 41	22,129 34
	4,787,452 4	5,047,260 84½	5,456,917 87	5,528,529 84	5,630,772 41	5,796,008 85	5,858,955 1	6,057,748 0
4.—Fees of Court or Office, Payment for Specific Services, and Reimbursements in Aid.								
Judicial Stamps...	394,242 72	404,177 63	483,162 69	423,161 53	485,221 24	491,775 69	538,670 68	524,437 84
Survey Fees	59,480 80	52,843 31	59,203 5	60,624 84	72,309 92	64,816 19	70,076 90	90,163 48
Recoveries on Irrigation Works ...	36,863 92	40,978 44	41,833 49	42,251 82	42,974 83	43,216 66	47,156 71	67,502 91
Hospital Stoppages	4,100 93	6,367 47	5,335 80	5,801 25	7,748 2	6,682 87	8,960 34	11,463 6
Refund of Hospital Expenses	23,009 34	20,431 80	19,894 62	24,866 18	24,618 84	32,362 85	36,114 1	35,410 49
Medical College Fees	—	—	—	7,272 0	7,703 0	11,328 50	12,117 50	15,244 7
Collections at Dispensaries	40,290 70	32,989 45	24,790 35	23,872 47	27,587 53	27,614 29	21,687 94	23,635 96
Sale of Drugs	—	—	—	—	15,219 53	18,157 17	11,653 3	11,731 79
Medical Aid Dues	166,823 84	180,508 57	178,140 28	201,231 56	211,622 27	220,138 33	222,212 15	224,599 16
Fees for Bills of Health	11,235 0	12,495 0	12,255 0	14,375 0	14,942 43	15,505 59	15,034 50	15,739 50
Cemetery Fees	585 0	578 50	1,331 77	1,048 75	539 0	469 0	436 60	624 25
Cost of Police within Municipalities ...	83,781 51	88,300 19	88,360 64	86,335 47	87,513 1	80,455 83	81,000 78	97,064 87
Police Rates in Towns and Rural Districts ...	53,303 93	51,000 17	54,713 56	65,499 48	62,123 16	65,477 97	66,275 83	72,131 42
Storage of Gunpowder	8,901 63	7,018 69	6,368 25	7,934 96	11,491 89	9,584 19	7,694 25	10,005 84
Value of Prison Labour	6,277 37	2,538 33	3,163 7	5,168 15	7,421 64	4,743 15	5,378 79	5,532 53
School Fees	27,926 6	30,419 51	25,704 60	26,969 75	28,555 0	28,636 5	30,271 79	29,916 83
School Books and Stationery	11,950 87	11,900 71	12,247 86	11,067 73	10,797 59	16,569 74	15,431 95	15,590 64
Government Gazette, Printing, &c. ...	41,217 68	37,743 40	19,978 6	16,037 74	14,424 97	16,179 32	18,244 77	21,459 30
Passage Money of Immigrant Coolies ...	10,672 75	9,858 0	9,557 75	7,670 75	105 0	126 50	13 0	24 50
Value of Tools Lost	2,121 66	1,680 14	2,568 0	1,086 84	1,581 39	1,537 96	1,938 34	2,893 69
Colombo Water Supply	140,000 0	140,000 0	140,000 0	140,000 0	140,000 0	140,000 0	140,009 70	172,500 0
Warehouse Rent	244,024 61	250,428 93	264,796 22	292,908 18	304,199 93	340,195 1	331,618 59	317,845 96
Pioneer Pension Stoppages	2,078 58	1,867 83	1,808 30	1,573 69	1,478 95	1,253 64	1,420 45	1,448 54
Fees under Inventions Ordinance ...	—	—	—	1,985 43	2,100 0	1,470 0	2,014 75	2,415 0
Arrack and Rum	103 4	152 32	199 36	284 48	267 75	353 25	—	—
Fees for Title Deeds	12,518 41	9,474 22	11,206 48	11,338 22	14,459 37	15,263 45	15,459 49	18,536 65

C.—Comparative (Detailed) Statement of the Revenue of the Colony of Ceylon, &c.—*contd.*

Heads of Revenue.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
4.—Fees of Court, &c.—*continued.*								
Hire of Anchors	—	—	3,359 50	8,725 0	9,557 0	9,240 0	9,540 0	10,905 0
Sundries	27,594 50	30,854 13	29,580 22	36,945 92	36,054 10	60,335 42	34,809 3	38,825 82
	1,409,104 85	1,424,606 74	1,499,558 92	1,526,037 19	1,642,617 36	1,723,488 62	1,745,241 87	1,837,649 10
5.—Post and Telegraphs. ...								
Postage Stamps...	503,075 51	538,460 62	561,594 36	603,064 18	607,111 78	653,206 72	681,603 35	699,869 64
Postage on Unpaid Letters	7,820 12	7,380 52	7,471 32	8,338 43	6,699 20	7,216 17	7,396 43	7,761 11
Commission on Money Orders	34,119 36	61,183 53	58,286 45	67,140 62	64,216 35	79,824 32	36,119 27	96,335 61
Telegraph Receipts	129,739 59	141,609 6	124,732 39	224,086 76	178,451 86	197,297 30	211,988 48	221,171 11
Earnings of Post Office Savings Banks ...	5,800 0	6,300 0	7,217 27	6,684 79	—	—	—	15,456 39
Telephone Receipts	—	—	16,299 10	16,178 0	16,164 2	16,387 0	17,770 70	17,782 65
Parcel Post Collections	—	—	—	—	3,172 60	19,609 84	—	—
Other Collections	7,945 43	14,542 65	52,200 73	30,391 96	30,509 86	23,261 51	26,095 69	52,408 23
	688,500 1	769,476 38	827,801 62	955,884 74	906,325 67	996,802 86	980,973 92	1,110,784 74
6.—Government Railway.								
Goods	3,976,543 93	4,109,361 70	4,410,138 4	4,596,753 96	4,614,116 46	4,914,270 17	4,792,482 66	4,782,212 54
Passengers	2,150,745 90	2,494,760 17	2,695,193 5	2,747,439 38	2,834,638 76	3,179,839 58	3,076,983 55	3,101,623 24
Miscellaneous	95,445 69	173,315 39	213,351 79	214,417 68	178,133 75	145,569 34	98,225 93	93,754 10
	6,222,735 52	6,777,437 26	7,318,682 88	7,558,611 2	7,626,888 97	8,239,679 9	7,967,692 14	7,977,589 88
7.—Rents of Government Property.								
Government Buildings and Houses ...	44,661 71	47,805 70	45,640 52	49,791 38	53,666 13	51,147 46	53,257 71	56,860 59
Garden Rents	8,496 65	7,095 71	11,877 8	12,922 69	15,342 15	12,563 44	12,688 5	24,145 97
Rent of Reclamation Ground ...	12,534 43	11,169 22	11,531 62	20,473 77	14,019 28	15,034 84	17,906 65	18,007 38
Rent of Lands	38,270 82	33,015 60	29,968 20	50,475 66	36,293 33	24,154 75	30,695 86	27,877 36
	103,963 61	99,086 23	99,017 42	133,663 50	119,320 79	102,900 49	114,548 27	126,891 30
8.—Interest.								
On Public Funds invested	265,046 44	404,662 16	478,902 39	581,378 87	428,984 41	425,678 48	358,626 21	432,591 42
On Bank Balances	59,156 8	40,592 34	24,941 68	10,269 12	8,732 19	8,593 9	11,576 82	21,613 29
On Suitors' Funds and Intestate Estates ...	13,215 58	10,242 63	17,776 49	17,057 28	16,568 29	17,752 73	20,000 15	12,809 76
On Arrears of Revenue	3,976 23	4,078 19	5,491 61	8,622 91	9,049 83	5,984 48	9,586 82	9,803 96
On Loans to Corporations	14,601 36	19,196 19	12,780 3	12,939 23	25,594 74	28,441 76	26,565 68	26,528 88
	355,995 69	478,771 51	539,892 20	630,267 41	488,929 46	486,450 54	426,355 68	503,347 31
9.—Miscellaneous Receipts.								
Sale of Old Stores	5,069 63	5,249 50	7,015 96	6,345 13	8,386 95	7,107 35	4,182 39	8,288 64
Over-payments recovered	91,763 20	71,104 37	252,756 81	52,705 13	47,203 82	28,642 47	16,135 58	23,045 3
Unclaimed Deposits	32,137 45	18,786 34	12,045 48	19,321 39	17,416 20	14,555 40	23,146 36	45,870 51
Value of Salved Coal	—	2,500 0	2,812 50	5,625 0	6,312 50	6,125 0	9,110 0	4,375 0
Profits on New Coins	—	129,721 34	—	44,538 4	128,248 53	126,512 78	—	—
Sundries	32,462 96	15,148 65	34,002 48½	43,166 68	58,685 26½	26,245 97	26,023 49	9,309 40
	161,433 24	242,510 20	308,633 23½	171,701 37	266,253 26½	209,188 97	78,597 82	90,888 58

10.—Sale of Government Property.								
Produce of Botanic Gardens	4,221 21	3,547 85	3,479 72	4,433 78	5,726 65	4,381 32	4,437 83	3,657 61
Timber and Firewood	422,411 17	462,546 9	475,725 63	492,724 50	486,472 36	378,937 9	340,749 35	308,386 55
Crops on Crown Lands	6,924 54	6,643 95	4,066 9	4,135 26	4,225 3	4,013 95	6,346 38	4,364 41
Sale of Sand	1,055 8	766 45	481 80	556 88	298 34	303 50	210 18	204 3
Pearl Fishery	—	—	491 58	0 36	336 0			
Sundries	20,918 30	15,389 2	27,588 44	26,527 43	20,804 86	17,308 32	14,311 38	13,062 28
	455,530 30	488,893 36	511,833 26	528,378 21	517,863 24	404,944 18	366,055 12	329,674 88
Total Revenue exclusive of Land Sales. ...	20,553,614 56	21,529,245 79½	23,507,551 75½	24,527,720 19	25,086,439 29½	26,507,134 73	25,879,825 47	26,515,574 10
11.—Land Sales.								
Lands	419,225 58	443,088 88	491,452 85	604,887 62	754,051 90	757,920 32	520,382 22	664,555 99
Premia on Leases	9,968 64	2,238 74	7,517 23	6,061 45	72,650 39	60,875 51	36,894 69	17,926 35
	429,194 22	445,327 62	498,970 8	610,949 7	826,702 29	818,795 83	557,276 91	682,482 34
Total Revenue ...	20,982,808 78	21,974,573 41½	24,006,521 83½	25,138,669 26	25,913,141 58½	27,325,930 56	26,437,102 38	27,198,056 44

D.—Comparative Statement of the Expenditure of the Colony of Ceylon for the Years 1895 to 1902.

	Heads of Expenditure.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1902 as compared with 1895.			
										Increase.	Decrease.	Increase. per Cent.	Decrease. per Cent.
		Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.		
1	Charges on account of Public Debt ...	3,140,872 19	2,911,807 79	2,860,295 51	2,808,860 72	2,802,454 50	2,802,422 41	2,805,029 84	3,099,403 41	—	41,468 78	—	1
2	Pensions	995,911 94	966,127 28	1,013,966 30	1,032,154 39	1,115,583 22	1,149,877 71	1,191,404 33	1,284,648 9	288,736 15	—	28	—
3	His Excellency the Governor ...	113,694 29	121,153 71	123,950 68	121,770 5	124,292 54	125,031 78	127,838 44	126,472 54	12,778 25	—	11	—
3*a*	Civil Service	—	—	—	666,281 9	667,973 70	661,511 68	652,717 11	663,645 88	663,645 88	—	—	—
4	Secretariat	246,507 2	263,506 24	268,528 34	198,587 91	206,245 89	249,328 16	263,289 14	273,565 16	27,058 14	—	11	—
5	Audit Office	67,084 53	68,754 6	69,351 17	47,465 42	49,156 66	49,160 75	49,085 33	52,246 56	—	14,837 97	—	22
6	Treasury	56,089 2	55,870 42	56,724 45	39,337 97	39,413 1	40,086 85	41,563 59	41,970 29	—	14,118 73	—	25
7	Provincial Administration ...	1,157,291 46	1,097,426 4	1,100,479 6	974,979 5	933,723 83	884,030 60	958,212 40	950,953 70	—	206,337 76	—	17
8	Survey Department	433,989 75	431,172 14	467,576 23	567,796 98	608,697 75	638,314 52	652,561 31	638,086 37	204,096 62	—	47	—
9	Customs Department	152,127 60	154,183 78	154,988 54	115,037 5	127,770 81	127,016 85	129,309 68	130,153 72	—	21,973 88	—	14
10	Port and Marine Department, Colombo ...	207,361 71	211,569 45	237,986 55	259,135 36	307,271 36	319,218 42	370,144 95	330,712 55	123,350 84	—	59	—
11	Port and Marine Department other than Colombo	35,333 3	35,149 53	37,085 2	38,691 76	41,557 90	34,212 78	38,575 30	42,084 55	6,751 52	—	19	—
12	Botanic Gardens	49,446 57	43,808 88	51,297 7	51,726 6	57,956 16	70,678 59	71,198 60	72,246 57	22,800 0	—	46	—
13	Colombo Museum	24,011 38	24,041 47	22,932 53	23,911 70	23,963 7	25,851 99	23,108 67	25,660 92	1,649 54	—	6	—
14	Legal Departments :—												
	Supreme Courts	112,929 63	117,558 67	130,280 92	127,693 32	126,013 57	128,488 61	154,778 92	156,277 41	43,347 78	—	38	—
	Attorney-General	57,428 30	56,374 82	56,394 33	56,929 69	61,876 14	60,432 34	60,917 15	60,799 75	3,371 45	—	5	—
	Solicitor-General	11,951 14	12,085 66	12,421 54	12,001 25	12,022 10	12,043 87	12,147 99	12,143 85	192 71	—	1	—
	District Courts	242,820 98	244,273 82	245,620 49	148,052 35	155,301 8	160,389 52	164,071 82	163,152 46	—	79,668 52	—	32
	Courts of Requests and Police Courts...	197,995 64	189,269 22	195,963 22	116,861 39	116,269 27	124,531 73	124,935 24	125,529 90	—	72,465 74	—	36
	Registration of Lands ...	83,568 26	85,309 21	86,808 91	77,411 72	78,336 17	77,461 89	78,385 24	78,408 17	—	5,160 9	—	6
	Registration of Marriages, Births, and Deaths	75,843 70	73,573 99	80,182 62	97,487 13	107,190 70	129,413 94	114,895 13	117,475 61	41,631 91	—	54	—
	Fiscals	174,835 99	184,422 54	196,481 14	192,906 15	193,665 12	208,309 92	238,416 37	229,775 81	54,939 82	—	31	—
	Loan Board	5,665 20	5,752 17	5,731 99	5,695 54	5,604 26	5,434 13	4,416 25	5,431 89	—	233 31	—	4
15	Police	632,769 44	638,176 87	697,552 11	710,953 15	715,439 8	721,511 37	716,423 77	732,646 59	99,877 15	—	15	—
16	Prisons	462,872 89	445,771 20	477,388 56	517,157 28	487,561 16	485,204 26	507,411 86	529,359 16	66,486 27	—	14	—
17	Medical Department	338,131 72	356,631 3	348,542 16	366,414 65	373,547 18	367,432 69	377,767 72	379,114 19	40,982 47	—	12	—
18	Hospitals and Dispensaries ...	965,386 62	970,138 98	977,340 64	1,138,644 74	1,259,266 21	1,209,980 99	1,311,393 15	1,219,504 24	254,117 62	—	26	—
19	Ecclesiastical	51,984 20	51,827 50	51,463 86	49,835 0	47,324 97	45,690 86	45,714 12	26,925 70	—	25,058 50	—	48
20	Education	636,270 47	668,273 85	716,766 71	738,122 5	778,133 85	820,133 87	907,997 29	952,279 98	316,009 51	—	49	—
21	Transport	15,364 90	16,533 4	20,387 43	20,481 46	13,641 23	14,708 31	13,887 47	23,061 79	7,696 89	—	50	—
22	Exchange	608,134 81	744,656 38	241,939 75	197,751 54	164,487 53	227,989 88	227,630 3	211,039 98	—	397,094 83	—	65
23	Military Expenditure	1,646,808 60	1,669,046 68	1,824,602 5	1,900,976 23	2,519,076 42	2,366,350 39	2,447,664 29	2,220,819 60	574,011 0	—	34	—
24	Miscellaneous Services	606,702 66	745,320 9	824,491 34	827,513 35	1,231,621 26	1,136,096 51	947,798 11	1,234,658 9	627,955 43	—	103	—
25	Government Stores	68,435 21	85,674 95	80,284 46	71,372 88	73,543 98	85,961 2	79,191 96	78,527 39	10,092 18	—	14	—
26	Crown Agents, London	3,231 57	2,990 82	2,113 30	2,733 89	2,704 46	2,033 66	2,719 2	2,715 0	—	516 57	—	15
27	Forest Department	420,082 82	460,431 25	481,566 89	501,089 82	378,484 50	341,313 79	286,589 69	266,729 17	—	153,353 65	—	36
28	Post Office and Telegraphs ...	813,114 84	911,606 89	835,752 79	933,365 70	964,414 56	1,098,798 17	1,052,676 6	1,125,136 92	312,022 8	—	38	—

29	Railway Department—Open Lines ...	3,110,718 74	3,289,579 54	3,333,326 14	3,635,279 98	4,098,601 43	4,366,298 45	4,725,724 59	4,897,546 67	1,786,827 93	—	57	—
30*a*	Public Works Department ...	384,482 88	378,324 42	372,891 79	387,609 12	429,812 47	455,332 49	402,423 37	411,289 76	26,806 88	—	6	
31	Public Works Annually Recurrent ...	1,600,923 20	1,525,055 5	1,519,439 16	1,643,771 62	1,758,447 38	1,896,243 19	1,839,690 26	1,874,387 64	273,464 44½	—	17	
32	Public Works Extraordinary ...	1,143,443 92	924,630 23	1,353,482 19	1,420,005 38	1,692,493 88	1,597,659 6	1,473,142 3	1,428,020 64	284,576 72½	—	24	
30*b*	Irrigation Department	—	—	—	—	—	—	203,737 8	309,830 84	309,830 84	—	—	
30*c*	Special Officer, Waste Lands Ordinances	—	—	—	—	—	—	—	26,730 30	26,730 30	—	—	
		21,151,618 82	21,237,859 66	21,634,377 94	22,843,851 89	24,950,940 36	25,321,988 0	25,896,594 67	26,631,168 82	6,511,838 33	1,032,288 33	—	—
									*289,290 79	*289,290 79			
									26,341,878 3	6,222,547 54			
29	Railway Construction ...	From Surplus Funds					3,626,939 17	3,170,000 0	948,165 48				
30*b*	Irrigation Construction Works ...						—	150,152 15	462,770 36				
1	Half-year's Interest on Loan (Ordinance No. 14 of 1900) ...						—	—	289,290 79				
							3,626,939 17	3,320,152 15	1,700,226 63				
	Grand Total, From General Revenue	21,151,618 82	21,237,859 66	21,634,377 94	22,843,851 89	24,950,940 36	25,321,988 0	25,896,594 67	26,341,878 3				
	Expenditure From Surplus Funds ...	—	—	—	—	—	3,626,939 17	3,320,152 15	1,700,226 63				
	Grand Total ...	21,151,618 82	21,237,859 66	21,634,377 94	22,843,851 89	24,950,940 36	28,948,927 17	29,216,746 82	28,042,104 66				

*Half-year's interest on loan.

E.—Comparison between Ceylon and other Colonies as regards Revenue and Public Debt.

Name of Colony.	Revenue, 1901.	Public Debt, 1901.	Population, 1901.	Amount per Head of Population.	
				Revenue.	Debt.
	£	£		£ s.	£ s.
Straits Settlements	674,828	—	617,595	1 1	—
Mauritius, &c.	611,998	1,186,684	383,086	1 11	3 1
Seychelles...	32,422	18,024	20.275	1 11	0 17
Labuan	9,642	—	8,411	1 2	—
Hongkong	877,894	341,800	283,975	3 1	1 4
Australian Commonwealth ...	29,840,865	205,983,028	3,775,490	7 18	54 11
New Zealand	6,152,839	52,966,447	772,719	7 19	68 10
Fiji	113,853	196,095	124,230	0 18	1 11
Malta	385,698	79,168	183,679	2 1	0 8
Bermuda	51,436	49,200	17,535	2 18	2 16
St. Lucia	67,365	175,780	49,550	1 7	3 10
Barbadoes	179,972	428,600	195,000	0 18	2 3
Grenada	70,075	123,670	63,438	1 2	1 18
Trinidad and Tobago	712,394	1,044,101	277,651	2 11	3 15
British Guiana	523,512	992,120	294,943	1 15	3 7
Gibraltar	71,107	—	20,355	3 9	—
Canada	10,886,860	72,890,226	5,378,800	2 0	13 11
British Honduras	60,224	34,736	36,998	1 12	0 18
Natal	2,970,742	10,574,143	929,970	3 3	11 7
Cape, &c.	8,578,076	31,393,435	2,350,000	3 13	13 7
Cyprus	198,070	65,000	237,053	0 16	0 5
Newfoundland and Labrador ...	423,407	3,570,908	214,000	1 19	16 13
Bahamas	77,780	111,626	52,196	1 9	2 2
Jamaica	904,041	3,432,058	755,000	1 3	4 10
Ceylon	1,762,473	3,606,868	3,576,990	0 9	1 0

F.—Statement showing the Comparison in the Cost of Administration between the Years 1895 and 1902.

Department.	1895.	1902.	Net Increase.	Gross Increase.	Decrease.	Analysis of Gross Increase.		
						Increase of Staff.	Increase of Salaries.	
							Temporary.	Permanent.
	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
His Excellency the Governor	100,161 0	103,957 0	3,796 0	4,605 0	809 0	4,430 0	—	175 0
Civil Service	662,000 0	676,268 0	14,268 0	41,268 0	27,000 0	—	4,540 0	36,728 0
Secretariat	43,912 0	75,999 0	32,087 0	35,732 0	3,645 0	31,938 0	—	3,794 0
Government Printer	26,635 0	46,385 0	19,750 0	20,292 0	542 0	15,820 0	2,000 0	2,472 0
Audit Office	42,639 0	47,079 0	4,440 0	4,968 0	528 0	3,356 0	—	1,612 0
Treasury	28,810 0	33,869 0	5,059 0	5,304 0	245 0	2,880 0	—	2,424 0
Provincial Administration	445,136 62	453,476 38	8,339 76	50,828 76	42,489 0	24,529 0	1,213 0	25,086 76
Surveyor-General	301,780 0	287,623 0	—	14,544 0	28,701 0	—	—	14,544 0
Customs	104,538 0	118,650 0	14,112 0	14,604 0	492 0	13,440 0	—	1,164 0
Port and Marine, Colombo	95,430 66	162,974 0	67,543 34	71,307 34	3,764 0	61,547 34	3,500 0	6,260 0
Port and Marine other than Colombo	22,591 0	24,574 0	1,983 0	3,650 0	1,667 0	1,680 0	—	1,970 0
Botanic Gardens	22,725 0	33,605 0	10,880 0	11,272 0	392 0	10,380 0	—	892 0
Museum	12,632 0	12,882 0	250 0	250 0	—	120 0	—	130 0
Legal Departments :—								
Supreme Court	91,803 0	119,840 0	28,037 0	28,197 0	160 0	24,906 0	—	3,291 0
Attorney-General...	48,557 0	49,387 0	830 0	830 0	—	—	—	830 0
Solicitor-General	11,730 0	11,950 0	220 0	220 0	—	—	—	220 0
District Courts	130,751 28	145,168 10	14,416 82	18,343 82	3,927 0	7,765 10	750 0	9,828 72
Police Courts and Courts of Requests	70,263 52	80,201 76	9,938 24	19,061 76	9,123 52	10,314 0	—	8,747 76
Registrar-General of Lands	67,782 0	76,404 0	8,622 0	9,708 0	1,086 0	4,772 0	—	4,936 0
Registrar-General of Marriages, Births, and Deaths ...	24,163 0	40,338 0	16,175 0	17,765 0	1,590 0	14,310 0	—	3,455 0
Fiscals	110,103 0	115,110 0	5,007 0	8,670 0	3,663 0	1,140 0	—	7,530 0
Loan Board	5,545 0	5,269 0	—	384 0	660 0	—	—	384 0
Police	514,390 24	580,623 0	66,232 76	80,572 76	14,340 0	60,404 0	12,980 0	7,188 76
Prisons	161,450 0	171,792 0	10,342 0	10,828 0	486 0	8,511 0	—	2,317 0
Medical Department	288,532 0	315,614 0	27,082 0	44,920 0	17,838 0	24,020 0	710 0	20,190 0
Hospitals and Dispensaries	90,767 0	82,351 0	—	10,816 0	19,232 0	4,716 0	—	6,100 0
Ecclesiastical Department	47,890 0	41,260 0	—	—	6,630 0	—	—	—
Education	261,819 0	328,490 24	66,671 24	80,662 24	13,991 0	48,412 24	1,000 0	31,250 0
Government Stores	38,087 0	39,613 0	1,526 0	5,017 0	3,491 0	1,542 0	1,000 0	2,475 0
Forest Department	105,879 0	92,515 0	—	10,887 0	24,251 0	2,200 0	—	8,687 0
Post Office and Telegraphs	333,748 0	517,267 0	183,519 0	187,918 0	4,399 0	181,743 0	—	6,175 0
Railway Department	1,014,973 0	1,248,736 19	233,763 19	249,206 69	15,443 50	192,619 38	1,000 0	55,587 31
Special Officer, Waste Lands Ordinances ...	7,200 0	16,440 0	9,240 0	9,840 0	600 0	5,440 0	—	4,400 0
Public Works Department	410,758 0	437,569 0	26,811 0	47,255 0	20,444 0	21,442 0	2,000 0	23,813 0
Irrigation Department	—	196,729 0	196,729 0	196,729 0	—	196,729 0	—	—
	5,745,181 32	6,790,008 67	—	1,316,456 37	271,629 2	981,106 6	30,693 0	304,657 31
				Deduct Decrease ...	271,629 2			
				Nett Increase ...	1,044,827 35			

G.—Comparative Statement of the Strength of the Administrative Establishment of the Colony between the Years 1895 and 1902.

Department.	1895.	1902.	Increase.	Decrease.
His Excellency the Governor ...	40	32	—	8
Civil Service	91	81	—	10
Secretariat	61	82	21	—
Government Printer	23	51	28	—
Audit Office	43	52	9	—
Treasury	30	38	8	—
Provincial Administration ...	1,120	1,063	—	57
Survey Department	170	163	—	7
Customs	241	238	—	3
Port and Marine, Colombo ...	159	269	110	—
Port and Marine other than Colombo ...	54	56	2	—
Botanic Gardens	24	28	4	—
Colombo Museum	14	15	1	—
Legal Departments :—				
Supreme Court	35	44	9	—
Attorney-General	19	18	—	1
Solicitor-General	5	5	—	—
District Courts	185	184	—	1
Courts of Requests and Police Courts	143	153	10	—
Registrar-General of Lands ...	119	126	7	—
Registrar-General of Marriages, &c.	56	76	20	—
Fiscals	479	479	—	—
Loan Board	5	4	—	1
Police	1,712	1,855	143	—
Prisons	486	518	32	—
Medical Department	233	248	15	—
Hospitals and Dispensaries ...	73	76	3	—
Ecclesiastical	16	12	—	4
Education	733	825	92	—
Government Stores	49	53	4	—
Forest Department	138	130	—	8
Post and Telegraphs	642	939	297	—
Railway Department	647	790	143	—
Special Officer, Waste Lands Ordinances	—	23	23	—
Public Works Department ...	251	242	—	9
Irrigation Department	—	147	147	—
Total ...	8,096	9,115	1,128	109
		Deduct Decrease ...	109	
		Net Increase ...	1,019	

H.—Statement showing Amounts realized on account of Arrack Rents from 1887 to 1904.

Province.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Western Province ...	786,225	795,105	791,665	819,142	876,207	968,762	961,765	1,026,127	1,048,600	950,675	980,230	1,059,110	1,297,282	1,341,582	1,428,338	1,525,737	1,520,442	1,781,249
Central Province ...	245,850	316,355	366,080	377,750	425,000	511,000	493,625	445,125	466,375	544,700	619,325	632,000	637,000	637,000	649,550	649,550	525,257	525,257
Northern Province ...	58,237	59,462	61,025	62,575	64,880	68,155	70,900	78,450	91,600	106,396	118,389	113,500	113,500	104,830	124,330	129,280	144,470	152,229
Southern Province ...	115,950	126,750	128,900	128,527	138,653	163,125	187,500	200,280	209,980	226,200	248,315	220,850	183,422	196,460	209,220	284,903	284,903	260,599
Eastern Province ...	62,925	61,950	64,150	70,780	73,530	77,100	78,600	83,650	89,725	97,115	106,536	133,592	134,592	112,552	113,111	113,111	126,159	126,160
North-Western Province ...	161,450	171,700	181,550	203,350	229,850	286,550	284,805	274,655	298,575	308,505	335,780	352,000	355,000	355,000	407,675	422,795	450,175	518,705
North-Central Province ...	17,375	15,800	14,300	15,075	15,075	15,825	19,025	22,275	20,275	18,925	22,950	28,650	31,200	31,200	37,620	42,880	50,175	50,175
Province of Uva ...	46,450	52,407	64,482	67,450	67,775	78,525	72,250	77,192	79,567	93,625	126,000	162,825	116,000	100,000	115,230	115,230	97,000	97,000
Province of Sabaragamuwa* ...	—	—	110,894	119,100	120,800	134,975	140,825	147,500	154,427	179,177	220,710	286,578	286,576	235,103	235,102	210,089	220,164	227,50
Total ...	1,494,462	1,599,529	1,783,046	1,863,749	2,011,770	2,304,017	2,309,295	2,355,254	2,459,124	2,525,318	2,778,235	2,989,105	3,154,572	3,113,727	3,320,176	3,493,575	3,418,745	3,738,878

* Province established in 1889.

XXIX.—1903.

ADMINISTRATION REPORT

OF

THE MUNICIPAL COUNCIL OF COLOMBO

FOR THE YEAR

1902

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price Re. 1·10.

1903.

MUNICIPALITY OF COLOMBO.

REPORT OF THE CHAIRMAN FOR 1902.

I.—REVENUE AND EXPENDITURE.

THE revenue of the year amounted to Rs. 1,405,838·88, exceeding that of the previous year by Rs. 175,833·68, and exceeding the average of the five years preceding by Rs. 360,359·36.

2. The increase was general under every head of revenue, except under the heads of Judicial Fines, Tolls, and Sale of Water; the decrease under the second head was owing to the Bambalapitiya toll fetching less than the year previous, and under the third it is owing to the value of the water supplied to the shipping being less than in 1901. There is a notable increase under the head "Licenses," owing to the rise of over Rs. 30,000 in the amount realized in the sale of opium licenses, and also to the revenue of Rs. 16,512 from the sale of intoxicating liquors for 1901 being received and credited in 1902. The increase of over Rs. 20,000 in the recoveries of the Health Department is owing to the natural expansion of business, and of over Rs. 75,000 in the recoveries of consolidated rates to more vigorous action in recovering the arrears.

3. The following statement gives details of the rise and fall under the specified heads of revenue :—

General Account.	1902. Rs. c.	1901. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Commutation under the Road Ordinance ...	98,258 0	90,098 0	8,160 0	—
Licenses ...	125,388 22	67,932 9	57,456 13	—
Markets ...	39,248 18	35,324 47	3,923 71	—
Slaughter-houses	50,969 52	47,088 85	3,880 67	—
Health Department	151,915 56	130,676 53	21,239 3	—
Judicial fines	29,772 94	31,239 47	—	1,466 53
Tolls	132,397 10	135,576 87	—	3,179 77
Miscellaneous	106,970 34	97,835 4	9,135 30	—
	734,919 86	635,771 32	103,794 84	4,646 30
Assessment Account.				
Sale of water	168,114 26	173,275 21	—	5,160 95
Consolidated rate	491,270 68	414,150 38	77,120 30	—
Other sources	11,534 8	6,808 29	4,725 79	—
	1,405,838 88	1,230,005 20	185,640 93	9,807 25
		Deduct Decrease ...	9,807 25	
			175,833 68	

4. The arrears of the consolidated rate outstanding on 1st January, 1902, amounted to Rs. 182,617·69, of which a sum of Rs. 150,043·55 was recovered during the year. The balance of Rs. 32,574·14 and the unpaid rates due for the fourth quarter of 1901 to the third quarter of 1902, inclusive, make up a total of Rs. 180,919·41, which represents the arrears outstanding on the 31st December, 1902. Deducting the arrears of previous years, viz., Rs. 32,574·14, from this sum of Rs. 180,919·41, the balance remaining, viz., Rs. 148,345·27, represents the arrears of 1902 only. The percentage of arrears of the year to the amount due for the year was 31·4 in comparison with 32·6 for 1901.

5. The expenditure for the year was Rs. 1,175,727·07, falling short of the expenditure of the previous year by Rs. 130,551·49, but this decrease is more than accounted for by the payment to Government in 1901 of the large sum of Rs. 361,600 for half cost of duplicating 10 miles of the water main. The ordinary expenditure shows an increase of Rs. 231,048·51.

The most notable increase in expenditure is that for extension of lighting, owing to the lighting of parts of the town which were not lit before and for the conversion of ordinary lamps into incandescent ones. A sum of Rs. 140,000 was voted for these works in 1901, but the larger portion of it was re-voted and spent in the year under review.

A sum of Rs. 20,000 was also voted in 1901 for laying larger water mains in the Fort, but the work was completed and expenditure met only in 1902.

The increase in advance account is due to the demand from Government of Rs. 20,000 to meet expenses in connection with the Mansergh Scheme of Drainage. The Council also contributed a sum of Rs. 17,000 towards the cost of widening Seabeach road.

It should be observed that the expenditure on the upkeep votes of the Works Department and the labour, &c., of the Health Department is for twelve months, the expenditure of December, 1901, being charged to the recurrent votes of 1902.

The amounts expended by the Works Department on upkeep and new works for 1901 and 1902 are given below :—

	1901. Rs. c.		1902. Rs. c.
Upkeep	203,729 3	...	216,136 86
New works	66,705 39	...	67,871 12
	270,434 42		284,007 98

The increase is chiefly due to twelve months' expenditure being charged to the upkeep votes in 1902, against eleven months in 1901.

6. The following statement gives details of the rise and fall under the specified heads of expenditure :—

General Account.	1902. Rs. c.	1901. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Contribution on account of Victoria bridge ...	8,000 0	8,000 0	—	—
Refund of loan to Government on account of Health Department	10,400 0	10,800 0	—	400 0
Salaries, allowances, and other personal emoluments ...	82,809 85	75,123 88	7,685 97	—
Commission on collections under Road Ordinance ...	7,728 90	11,038 77	—	3,309 87
Costs in legal proceedings ...	932 87	1,037 52	—	104 65
Feeding charges at slaughter-houses	3,761 82	3,247 80	514 2	—
Miscellaneous charges ...	51,582 24	49,276 69	2,305 55	—
Works Department ...	284,007 98	270,434 42	13,573 56	—
Scavenging	43,966 81	33,520 68	10,446 13	—
Slaughter-houses ...	4,540 45	7,202 24	—	2,661 79
Advance account ...	21,411 56	4,430 86	16,980 70	—
Health Department ...	135,170 40	139,904 47	—	4,734 7
	654,312 88	614,017 33	51,505 93	11,210 38
Assessment Account.				
Waterworks and Police ...	190,000 0	190,000 0	—	—
Lighting	105,852 80	90,523 78	15,329 2	—
Extension of lighting	129,801 85	2,902 75	126,899 10	—
Extension of water ...	20,786 6	2,448 85	18,337 21	—
Salaries, allowances, and other personal emoluments ...	29,199 70	28,377 62	822 8	—
Costs in legal proceedings ...	803 50	968 87	—	165 37
Miscellaneous ...	27,970 28	15,439 36	12,530 92	—
Share of cost of duplicating water main for 10 miles ...	—	361,600 0	—	361,600 0
Contribution to Government for widening Seabeach road	17,000 0	—	17,000 0	—
	1,175,727 7	1,306,278 56	242,424 26	372,975 75
			Deduct Increase ...	242,424 26
				130,551 49

7. The balance to the credit of the Municipal Fund on 1st January, 1902, was Rs. 746,920·79, and at the close of the year it amounted to Rs. 977,032·60; the difference between these two sums namely, Rs. 230,111·81, is accounted for as follows :—

	Rs. c.
Revenue, 1902	1,405,838 88
Expenditure, 1902	1,175,727 7
	230,111 81

8. The prescribed statement showing the nature and amount of receipts and disbursements on account of the Municipal Fund during the year is contained in Appendix A.

II.—LEGISLATION.

9. The Amending Municipal Councils' Ordinance, No. 7 of 1902, besides conferring powers on the Council, as elsewhere mentioned, to permit the laying of electric mains, has substituted four Standing Committees for one. It has also empowered the Council to levy a Municipal tax on vehicles licensed for hire, which have hitherto escaped it, and will allow the consolidated rate to be applied to general Municipal purposes as well as to lighting, police, and water, to which purposes it has hitherto been confined.

10. The revised by-laws, which had been published in the *Government Gazette*, were laid on the table of the Legislative Council as required by the Ordinance, and objection was taken to some of them by a Member of the Legislature. The objection was forwarded to the Council, and as it was discovered that by an error no penalty clauses had been provided, and that some of the by-laws were defective, the whole question of the by-laws was referred to a Special Committee, which has nearly completed its task of revision. Certain by-laws proposed by Major Knollys for the licensing of drivers of hired carriages were adopted by the Council, and will be included.

11. Another Special Committee has had under consideration the question of the exemption of untenanted buildings from assessment tax, and the definition of the annual value of lands and tenements.

III.—Municipal Works.

12. The following works, which were incomplete at the end of 1901, were completed during the year :—

	Estimated at Rs. c.	Expenditure. Rs. c.
Improvement of road through Uplands ...	4,630 62	4,630 29
Drainage, Gasworks street ...	7,750 0	7,749 71
Drainage, Church street ...	2,080 0	2,080 0
Filling Price Recreation Ground ...	3,497 50	3,496 51
Setting back wall, Malay street ...	1,610 0	1,591 30
	19,568 12	19,547 81

The improvement and drainage of Sea street was completed during the year, and the amount spent in the year was Rs. 4,225·86.

13. New works undertaken, but not completed within the year, were as follows :—

	Estimated at Rs. c.	Expenditure. Rs. c.
Repairs to Dean's road market ...	8,403 83	4 81
Footways, Church street ...	2,163 24	1,445 10
Drainage, Layard's broadway ...	20,362 0	12,681 97
Drainage, Nagalagam street ...	18,852 0	4,661 13
Filling Price Park	3,026 0	2,250 49
Rebuilding Kotahena fire station ...	1,400 0	57 77
Septic tanks at night soil depôt ...	2,657 0	381 80
Construction of seven watering carts ...	2,450 0	2,242 56
Widening entrance of Seabeach road ...	1,109 76	170 42
First cost of buildings, &c., fire brigade ...	32,607 50	10,246 1
Drainage, Maradana District ...	40,309 0	4,665 47
	133,340 33	38,007 53

IV.—Special desirable Measures.

(1) *Water Supply and Drainage.*

14. Government having agreed to a limitation of the Council's liability to supply water to Government institutions and buildings, the negotiations on this subject were brought to a conclusion.

The work of duplicating the main from Labugama is now proceeding, and the use of the Council's land near the old Bridge-of-boats has been given to the Public Works Department for the temporary storage of the pipes. Proceedings are being taken to acquire Elie House grounds for the construction of a second reservoir, and the Council has applied to Government for permission to take gravel from these grounds, and to acquire a portion that will not be required for the reservoir for the purpose of a recreation ground. The duplication of the main is expected to be completed in about a year's time, and it will increase the daily supply of water from 2,800,000 gallons per diem to 6,000,000.

The larger water mains to the Fort sanctioned last year were completed during 1902, securing a better pressure during the hours when water is being drawn for the shipping.

15. The modified Mansergh Drainage Scheme will shortly be taken in hand, the Engineer in charge, Mr. Tickell, having arrived in Colombo towards the close of the year. It has not yet been found necessary to impose the proposed 2½ per cent. sanitary rate for the carrying out of this scheme. The Council, however, has undertaken to impose it as soon as it becomes necessary.

Drainage.

16. Underground drainage schemes for Layard's broadway, 2nd Division Maradana, and Nagalagam street were passed by the Council in 1902. The estimated cost of these works is Rs. 20,362, Rs. 40,309, and Rs. 18,852, respectively. Considerable progress has been made with the first of these schemes, and the second has been commenced.

17. The sum of Rs. 10,500, being stamp duty on licenses on arrack taverns, was paid by Government to the Municipal Fund, and was as usual devoted to works of sanitation ; Government has notified to the Council that this amount will in future be paid less the usual 5 per cent. for commission on stamp duty. Of the amount paid by Government, a sum of Rs. 2,074 was voted for expenditure during the year, and the balance will be re-voted for expenditure in 1903.

V.—Other desirable Measures.

(1) *Lighting.*

18. Work has proceeded throughout the year under the two gas contracts signed in 1901. Nearly all the old ordinary gas lamps of 12 to 14-candle power have been converted into new incandescent lamps of 60-candle power, while new mains have been laid in many parts of the town and 182 new lamps erected.

The following figures from the Gas Inspector show the progress during 1902 :—

Total number of lamps, December, 1901	1,684
Total number of lamps, December, 1902	1,866
Increase on 1901 ...	182

	No. of Incandescent Lamps.	No. of Lamps with Ordinary Burners.	Total.
December, 1901 ...	108	1,576	1,684
December, 1902 ...	1,794	72*	1,866

* Bracket lamps.

As to candle power :—

				Total Candle Power
	December, 1901.			
1,576 ordinary ...	... = 18,912			
108 incandescent 23 triple 5 double 80 single	159 burners at 60 candle power = 9,540		...	... 28,452
	December, 1902.			
72 ordinary ...	... = 908			
23 triple 5 double 1 six-light 1,765 single	1,850 burners at 60 candle power = 111,000		...	... 111,908
		Increase of candle power over 1901	...	83,456

19. An extension of the hours of lighting has taken place, and the lighting is no longer omitted during the supposed existence of moonlight. The main road lamps, both electric and gas, are now lighted every night from 6 P.M. to 5.30 A.M., and those on the minor roads from 6 P.M. to midnight, whether there is moonlight or not.

20. Provision has also been made for improved lighting in Dean's road market and Campbell Park.

(2) *Electric Lighting and Power.*

21. Powers have been conferred on the Council by Ordinance No. 7 of 1902 to permit the laying of electric mains and other works in the streets, subject to the general control of the Government, and to make rules dealing with such concessions. Prior to 1901 permission had been given by the Chairman to Messrs. Boustead Brothers to construct certain electric lines for the distribution of light and power. They were constructed subject to electrical conditions laid down by the Government Telegraph Department, the Chairman confining himself to prescribing the route they should follow in the streets. It was subsequently discovered that the Chairman had no legal power to grant such concessions, useful though they might be, and in consequence of this, on the application of the Council, the necessary authority was conferred by Ordinance No. 7 of 1902, and control over such works, both electrical and general, was conferred on the Council.

Rules have been framed by the Council, and a concession for laying underground mains has been granted to Messrs. Boustead Brothers, and permission given to that firm, pending reference to the Board of Trade, to connect these new underground mains with the already existing overhead system. Arrangements are also already in progress to permit Messrs. Boustead Brothers to construct an overhead service to supply power to the new electric cranes in the Customs premises. All these works will be carried out subject to the rules framed by the Council.

22. An application was received under the same Ordinance from Messrs. Delmege, Forsyth & Co. for permission to lay pipes from their store at Korteboam street to the railway at Maradana Junction for the purpose of supplying kerosine oil direct to the railway for transport up-country. The Council has signified its willingness to grant the concession, subject to certain conditions, and the firm has been asked whether it will accept them.

(3) *Tramways.*

23. There has been no extension of lines for tramways during the year. The total number of passengers carried during 1902 was 6,681,136, compared with 6,542,282 during 1901; and the average daily number was 18,304, as against 17,921 the preceding year. The total car mileage during 1902 was 871,489. There were 44 accidents reported, 19 due to persons attempting to jump on or off cars in motion and 25 to collisions and other causes. Of these, 3 had fatal results, but the Coroner's inquest held in each case absolved the Tramway Company's employés from blame. The majority of the remaining accidents resulted in slight or no apparent injury.

24. There were no complaints in connection with overcrowding; two new cars were constructed during the year, and the total number running on both routes is thirty-two.

25. By-laws under Ordinance No. 9 of 1901 to regulate the traffic arrangements on the tramways and to provide for the safety and comfort of passengers making use of them, have been laid before Government and accepted, and will shortly come into force.

26. A claim preferred by Messrs. Boustead Brothers against the Council in connection with a subsidence on the tramway route in New Moor street was, on the advice of the Council's lawyers, not entertained. A further subsidence on the same portion of the route occurred in December, and was repaired by the firm.

27. A claim was received from Messrs. Boustead Brothers requesting the return of the stamp fees levied on the licenses of the tram cars, on the ground that they are exempt from Municipal taxation. The opinion of the Council's lawyers was taken on this claim, and in accordance with that opinion the Council has notified to the applicants that the claim cannot be admitted.

(4) *Prevention of Overcrowding of Houses.*

28. Inspection of overcrowded houses in the different wards is done, and the nuisance abated after due warning. One prosecution was entered during the year in the New Bazaar division and the party responsible was fined.

(5) *Insanitary Buildings.*

29. The question of prohibiting the erection of small insanitary and objectionable buildings in the residential quarters of the town was considered by the Council and referred to a Special Committee. By-laws for that purpose were considered by the Committee, and after amendment referred to the Council's lawyers.

(6) *Supervision of Dairies.*

30. The number of registered dairymen within Municipal limits on 1st January, 1902, was 112; during the year seven new dairymen were registered, and four for registration were refused.

The following is the distribution of the 118 dairymen carrying on business at the close of the year:—

St. Paul's Ward ...	61
Kollupitiya Ward ...	18
Slave Island Ward ...	32
Maradana Ward ...	1
New Bazaar Ward ...	3
Kotahena Ward ...	2
Pettah Ward ...	1
Total ...	118

31. All dairy premises, together with the cattle, appliances, and the utensils therein used, were periodically inspected, and the requirements of the officers were in nearly every instance fulfilled by the persons responsible. There were 43 prosecutions during the year: 20 for unregistered dairies and 23 for filthy premises. Fines were inflicted in every case.

32. The inspection of dairies outside Colombo began on 1st January, and has been continued throughout the year. It is done by the local headmen under the supervision of the Mudaliyars. An average of 162 dairies has been inspected.

(7) *Supervision of Laundries.*

33. The number of registered dhobies at the end of 1902 was 403, as against 356 at the close of the previous year. The number of authorized washing-places was 26, as before.

34. The inspection of laundries outside Colombo began on 1st January, and has been continued throughout the year. It is done by the local headmen under the supervision of the Mudaliyars. An average of 565 laundries has been inspected.

(8) *Ambulance.*

35. At the request of the Government the Council has agreed to establish and maintain an ambulance in connection with the harbour. The working of it will be undertaken by the Government Medical Department.

(9) *Inspection of Bakeries.*

36. All bakeries were regularly inspected by the Ward Inspectors, who furnished weekly returns specifying any infraction of the by-laws, and reporting on the weights in use as well as on the quality of the bread supplied. The Medical Officer of Health also inspects periodically. The general condition of the bakeries is satisfactory. There were 43 prosecutions for infraction of the by-laws, and 42 of these resulted in fines. In the other case the accused died before the case came for hearing.

(10) *Recreation Grounds.*

37. The open spaces at present maintained on behalf of the public are the following:—

	Area. A. R. P.	Expenditure, 1902. Rs. c.
Galle Face Esplande ...	52 3 25	422 58
Gordon Gardens... ...	2 3 28	1,007 10
Racquet Court	9 2 24	1,078 49
Price Recreation Ground ...	7 3 32	289 52
Campbell's Park... ...	14 2 27	1,198 65
Victoria Park	100 0 0	6,263 38
Havelock Town Park ...	5 0 0	906 13
Total ...	186 0 16	11,165 85

38. Some further filling of Price Park was done during 1902 on the recommendation of the Ward Member, at an estimated cost of Rs. 3,026. The circular walk in Victoria Park was re-laid with quartz gravel during the course of the year, and the roads at Havelock Town Park were taken over by the Council.

(11) *Fire Station, &c.*

39. The contract for the erection of the new fire station at Reclamation road was signed in July, and the building is expected to be completed by May next. Bricks for the purpose were purchased from the Brick and Tile Co. and re-sold to the contractor, a special overseer being temporarily appointed to see that they were properly taken over. A quantity of the earth removed in excavating the foundations was transported to Silversmith street quarry and used in partially filling it.

Arrangements were made to have the steam fire engine, which was ordered in England, inspected by an officer of the London County Council, and the inspection was duly carried out. It had been arranged with Messrs. Shand, Mason & Co., from whom the fire engine was purchased, that it should not be sent out until they received a request to do so from the Council, as it was not considered advisable to have it out until the new fire station was ready to receive it.

The Secretary of State, however, without any request from the Council, directed Messrs. Shand, Mason & Co. to forward the fire engine on completion of the inspection above-mentioned, and I only heard of this having been done on 20th October, a few days before the fire engine arrived in Colombo. A temporary fire station had in consequence to be hurriedly put up at a cost of Rs. 394, the permanent station not yet being ready.

40. The old fire station at Kotahena having been reported to be in a dangerous state, the Council voted a sum of Rs. 1,400 for rebuilding the walls, and the work is now in progress.

VI.—Works Department.

41. Mr. Skelton, the Superintendent of Works, returned in September, and Mr. Dassanaike, who had acted for him during his nine months' absence, reverted to his own post of Assistant Municipal Engineer, while Mr. De Livera, who had temporarily occupied Mr. Dassanaike's post, reverted to the Public Works Department.

The Special Committee on the Works Department engaged the services of Mr. Martin, the Accountant of the Public Works Department, to audit the Works accounts for 1899 to 1901, inclusive. The audit was not completed until November, as Mr. Martin had his own work to attend to as well. The result of the audit, as well as the recommendations of Mr. Martin as to the method of keeping the accounts in future and as to the books and forms to be used, will be dealt with by the Special Committee. While Mr. Martin's audit was in progress the Committee met several times and adopted some regulations that were drawn up by the Hon. Mr. Cooper for the Works Department. They are based on the Public Works Department Code. The Committee further recommended that the upkeep of roads, the construction of drainage works, and small works of construction and repair should be carried out departmentally, while large works of construction and repair should be given out on contract.

42. I am now quite satisfied that the Works Department is undermanned.

The Standing Committee at my request voted temporary extra clerical assistance during the course of the year, pending the report of the Special Committee; and I have proposed to this latter Committee the provision of further assistance both to the supervising and to the clerical staff. So much of the Superintendent of Works' time is taken up in supervising works of construction, that he has not enough leisure for preparing plans and estimates for new works. The Special Committee have called for a report from the Superintendent of Works on the distribution of duties among the existing and proposed staff, and when this is received my proposal will be considered.

Metal.

43. Metal was supplied in 1902 partly on contract at Rs. 12 per cube by two contractors, and partly departmentally from the quarry at Cliff House grounds, the use of which was kindly permitted by the Government Agent. The proportion of the supplies was as follows :—

	Cubes.
Total requirements as per the year's estimates	10,023·65
57·22 per cent. supplied on contract	5,735·17
14·03 per cent. supplied departmentally	1,406·39
28·75 per cent. could not be supplied during the year	2,882·09
Total ...	10,023·65

The extremely wet weather in October and November threw back the supply of metal.

44. The modified scheme for a quarry to be owned by the Council, which included the lease of a portion of Hill House grounds, was adopted in March, laid before Government, and sanctioned, and the Government Agent was just proceeding to acquire the lands when Mr. J. S. Drieberg, whose residence was included among the properties to be acquired, sent in a protest against the acquisition during the month of August.

The Council referred the question of the possibility of obtaining other sites to a Special Committee, and several alternative sites for a quarry were suggested, and the Superintendent of Works was requested to report on them. He has not been able to do so up to the end of the year, and the prospect of the Council owning a quarry seems almost as far distant as before.

It is a pity that Mr. Drieberg did not send in his protest at a much earlier date, for the acquisition of his residence formed part of both the original and modified schemes for the quarry, and the plans have been on more than one occasion referred to the Government Agent, whose Office Assistant Mr. Drieberg is, so that it is difficult to understand how he could have been ignorant of the fact that it was proposed to acquire his property.

45. For 1903 contracts for metal have been secured at the same rate as for 1902.

Gravel.

46. Contracts for the supply of gravel in 1902 at rates varying from Rs. 5·50 to Rs. 8·40 per cube were entered into with three contractors. The requirements for the year were 5,648·79 cubes, of which 2,448·74 cubes or 43·34 per cent. were supplied on contract, 2,331·18 cubes or 41·28 per cent. departmentally, and 868·83 cubes or 15·38 per cent. was unsupplied at the end of the year. The departmental supplies were drawn from Maligakanda Park, and the work of levelling the park was continued.

47. For 1903 contracts have been entered into with four contractors for the supply of gravel at rates varying from Rs. 5 to Rs. 8 per cube.

48. Estimates have been prepared and passed by Council for the conversion of the following gravelled roads into metalled roads :—

	Rs. c.
North and South Base Line road	5,073 45
Galle Face Church road	1,072 80
Maliban street	1,162 20
Jail road	2,386 98
Bridge street	759 90
	10,455 33

and the work will be taken in hand as opportunity occurs.

Closing of Road.

49. Notification was received from Government in February that it was intended to close the road between Queen's House and the Pilots' Tower, on the ground of the alleged insanitary condition of the Crown land below the Pilots' Tower. The Council protested against this decision, and pointed out that as the spot complained of was on the opposite side of the Pilots' Tower from the road, and accessible from the open ground below, the closing of the road would in no way abate the nuisance. Subsequently the Government informed the Council that the closing of the road was necessary on Military grounds.

New Road to Base Line Road.

50. Negotiations were resumed with the object of completing the road from Maradana to the Base line alongside of the railway. Work had been stopped in 1900, as the General Manager of the Railway declined to allow the road to be carried alongside of the Maradana Junction Station, after having previously agreed to permit this being done. The proposed building of a Central Station at this spot appears to have been the reason for this refusal. Government has consented, in view of the necessary diversion of the road to make room for the new station, to contribute a sum of Rs. 6,000, and the selection of the site for the diversion awaits the final decision as to how much land is required for the station.

Road near Railway Terminus.

51. The congested state of the traffic near the Terminus led to negotiations with the Eastern Produce Company for the purchase of a piece of their land with the building standing on it for the widening of the road. The Council has secured the land with the buildings standing on it for Rs. 44,928·86, which is believed to be a favourable bargain, and Government has consented to give a small piece of land from the Royal College grounds, on the Council undertaking to rebuild the wall and provide for the necessary drainage. The road when completed will be about 75 feet wide.

Widening Seabeach Road.

52. A dangerous corner exists at St. John's warehouse in Seabeach road. Matters were represented to Government, and it has been decided to widen Seabeach road to 50 feet from the new grain sheds to Reclamation road. The work is being done at the expense of Government, the Council contributing Rs. 17,000, being half the estimated cost of removing St. John's warehouse, and undertaking to make certain alterations estimated to cost Rs. 1,109·76 to the latrine adjoining it in order to give room for the widening of the road.

Parsons Road.

53. Negotiations were entered into with the Military authorities to obtain for the Council a more undivided control over Parsons road, which runs over Military ground from near the Fort railway station to the Military offices in Slave Island. I regret to state that so far the Military authorities have not viewed the proposal with favour, although the Council is prepared not to construct tramways or erect overhead electric lines along the road without the consent of the Military.

Malay Street.

54. The portion of Malay street lying between the bazaars and the junction with Kew road has been widened by setting back the boundary walls of the old Slave Island jail and of the Mounted Orderlies' stables.

Ground near Museum.

55. A portion of the open ground near the Museum, in extent 7A. 0R. and 36P., has been handed back to Government to permit of extensions being made to the Museum buildings.

Alternative Route, Maradana to Pettah.

56. Inquiries were made as to the possibility of an alternative route from Maradana to the Pettah by way of Captain's Garden and across an arm of the lake near the Terminus, but the crossing of the railway line was found to be impracticable.

Repairs to the Lock-gate, &c.

57. A sum of Rs. 472·85 was spent on repairs to the Lock-gate, and the guides' shelter was enclosed and lighted with gas.

Land in Church Street.

58. The Directors of the Grand Oriental Hotel have asked for a sale or lease of a portion of Church street for extending the hotel verandah. They have been asked whether they will in return for this concession provide an open verandah for the use of the public, extending along York street from the beginning of the jewellers' shops to the corner of Prince street.

Improved Office Accommodation.

59. Plans and estimates were prepared for improving the office accommodation, and the Council accepted them and voted a sum of Rs. 60,000 for the purpose. The Superintendent of Works is now preparing specifications for the works to be done on contract.

VII.—SANITARY DEPARTMENT.

60. The late Sanitary Officer, Dr. Drieberg, retired on pension at the end of March, having been granted three months' leave prior to retirement. As the Sanitary Department required strengthening owing to the growth of the town, I proposed to the Council to obtain the services of an officer from England on a five years' agreement and to appoint an Assistant locally, it being a condition that both officers should hold a diploma in public health or equivalent British qualification, in addition to their ordinary medical qualifications. After a considerable amount of discussion the proposal was adopted, and the selection of the officer from England placed in the hands of Dr. Perry, who was proceeding home on leave. He selected Dr. Marshall Philip, who arrived in Colombo in November, while Dr. Joseph de Silva, late of the Bacteriological Institute, was locally appointed as his Assistant in September.

The Council is to be congratulated on securing the services of two such well-qualified officers. Dr. Philip has already taken in hand the re-organization of the Department, and has instituted a course of special training for the Sanitary Inspectors, which was found to be very necessary. A separate Inspector was appointed for the St. Sebastian Ward, and a second Inspector for the large and important Ward of Kollupitiya. Dr. Nicholas acted as Sanitary Officer from 1st January until Dr. De Silva assumed duties. An additional clerk was given to the Department, which had hitherto only had one, and its clerical staff will probably require to be still further strengthened.

The Colombo Lake.

61. The Colombo lake was placed in charge of the Council in 1888, on condition (1) that no encroachments, such as roads, should be made without permission of Government; (2) that Government might resume it at any time; (3) that the Council should keep it in good order. Since that date the average annual expenditure by the Council on the lake has been about Rs. 10,000. Recently the Government Agent, Western Province, raised the question of the Council's liability to remove encroachments made by third parties. The Council did not admit any such liability, and pointed out that, as the lake had never been vested in the Council under the provisions of section 72 of Ordinance No. 7 of 1887, the Council had apparently no power to maintain an action for any such purpose. A proposal that on the lake being formally vested in the Council and an up-to-date survey of it being furnished by Government, the Council should undertake to remove future encroachments by third parties, is now before Government.

Lake Fly Nuisance.

62. Experiments with lights placed along the lake shore in the neighbourhood of the Pettah railway station were tried, and were reported to have proved fairly successful, when the rains made it impossible to continue them. They are being resumed with the return of better weather. Notices prohibiting fishing in the lake have been put up, and it is proposed to introduce a new by-law on the subject. On the suggestion of Dr. Chalmers a portion of the lake bank was cleared, and slag laid down extending from a little above to a little below water level. The result of this experiment will be awaited with interest.

Scavenging.

63. The contracts for scavenging the town and ordinary conservancy of the lake were given out to one person during 1902 for Rs. 46,500. So long as the contracts were in the hands of different persons it was difficult to fix the liability for accumulations of silt in the lake which came in from the town drains. The lake contract required the contractor to remove this silt, but as its presence in the lake was due to defective scavenging, it was felt to be rather a hardship to insist on the letter of the lake contract. Now that both contracts are in the same person's hands, the liability becomes reasonable enough. For 1903 these contracts have been again given to one person for a total of Rs. 43,000.

64. Time plates to indicate the hours of scavenging have been fixed in the various parts of the town, and an experiment will be made with an improved type of scavenging cart.

Private Scavenging Carts.

65. The Council has at present no control over the large number of private carts which remove rubbish of all kinds both from the road and private premises and use it to manure grass fields. This often creates a nuisance, and it is proposed to introduce a by-law to deal with it.

Meat Stalls, Dean's Road Market.

66. Tenders were invited for the meat stalls in Dean's road market for 1903, resulting in a monthly revenue to the Council of Rs. 1,122, instead of Rs. 257·50, the amount hitherto received.

Mutton Stalls, Slave Island Market.

67. In March an attempt was made to secure tenders for the Slave Island mutton market. It failed at the time, but was renewed in December, when tenders were received at the rate of Rs. 250 a month, the previous revenue having been only Rs. 80 a month.

68. In the case of both these markets there were strong combinations among the present stall holders to keep down rates.

Wages of Market Coolies, &c.

69. The wages of the market coolies were raised during the course of the year, and a new type of fish block is being tried in one of the markets.

Public Health.

70. A report prepared by the Medical Officer of Health is contained in Appendix B.

71. The two segregation camps at Kanatta were maintained during the year.

72. The destruction of rats was continued throughout the year, and the number destroyed during 1902 was 49,139. The reward paid for the capture of rats remains at five cents each, and they continue to be destroyed at the lethal chamber and are afterwards incinerated at the infectious diseases hospital.

Lethal Chamber, &c.

73. The lethal chamber was found to be in a defective state, and it was overhauled and put into thoroughly good working order. The feeding of the captured dogs was also improved under the advice of the Veterinary Surgeon. The fee for seizing dogs had to be raised, as it was found that what was paid in Colombo was only half of that paid in Galle. The new Ordinance No. 25 of 1901 for the registration of dogs will come into force in 1903, and by-laws framed under it by the Council have been sanctioned by the Government. The dog pound will be enlarged in order to provide for the increased period of detention required by the new Ordinance in the case of stray dogs seized. One dog pound keeper had to be dismissed during the year for irregularities.

Dog Tax.

74. The licenses taken out between 1895 and 1902 :—

Year.	Number of Dogs licensed.	Amount. Rs. c.
1895	3,018	2,263 50
1896	3,381	2,535 75
1897	3,061	2,295 75
1898	3,038	2,428 50
1899	3,389	2,541 75
1900	3,025	2,268 75
1901	4,203	3,152 25
1902	4,864	3,648 0

75. The dog pound books show the following :—

Stray Dogs.	1897.	1898.	1899.	1900.	1901.	1902.
Seized.... ...	2,109	2,270	4,094	6,507	3,274	3,255
Redeemed ...	516	363	431	549	1,167	912
Sold by auction ...	26	21	29	35	35	20
Destroyed ...	1,559	1,886	3,632	5,923	2,055	2,267
Died in pound ...	8	—	2	—	17	32
Balance in pound on December 31 ...	—		—	—	—	24
Total ...	2,109	2,270	4,094	6,507	3,274	3,255

Health Department.

76. The work of conserving the public latrines and private premises was carried on during 1902 under contract for the first time. There was already in existence a contract for the supply of cattle for the night soil carts for the three years ending 31st December, 1902, and in order to avoid friction it was considered advisable to give the conservancy contract to the same person during 1902.

Payment is made monthly according to the number of buckets conserved and the number of cattle supplied. All complaints are reported on by the supervisors, and after the contractor has had an opportunity of making an explanation I deal with the cases, and whenever neglect is shown to have occurred fines are imposed. The total amount of fines during the year was Rs. 827·70, and a book is now kept in which all fines are entered by me personally. It is estimated that under the contract the conservancy of the town has cost Rs. 4,500 less than it would have done had it been carried out on the old check roll system. The contracts for conservancy and supply of cattle for 1903 were given out to a new contractor, and will probably result in a further saving of some Rs. 13,000. The result of the year's work showed that only a few minor amendments were required in the provisions of the contracts, and these amendments have been duly made.

77. The night soil carts have been kept in a satisfactory state of repair by the Works Department, and breakdowns have been few. Single bullock carts are being discontinued as far as possible, as they are far more expensive in proportion than the double bullock carts, and are more difficult for the cattle to draw. Weekly reports on the condition of the carts are sent to the Superintendent of Works, a system which secures that no defects are overlooked.

78. The question of the future disposal of sewage has engaged the attention of Council. The amount of land available for burying night soil is very limited, and bacteriological reports have shown that pits once used should not be re-opened for a number of years. The question of transporting the night soil further out of Colombo by train was considered, but found to be impracticable. The Council then authorized an experiment being tried with septic tanks. Two small experimental tanks are expected to be ready some time in January, and if they prove successful should form a satisfactory solution of the question of disposal of the night soil. In the meantime the Government has rented to the Council an additional 10 acres of land for burial of night soil pending the result of the septic tank experiment. The rent is somewhat excessive, but the Government declined to reduce it.

79. It is intended to construct eleven coir dust sheds for the public latrines, and a contract for the construction has been entered into with Messrs. C. A. Hutson & Co.

80. Amended by-laws were passed to provide for payments on account of conservancy for broken periods and for the services of day and special coolies.

81. On the suggestion of the Hon. the Auditor-General, the system of checking the Health Department ledgers was modified, saving a good deal of the Secretary's time; and in view of the increased number of premises that are being conserved, the Standing Committee gave further clerical assistance.

82. An overseer was appointed to supervise the conservancy of the public latrines in the Fort, Pettah, St. Paul's, and St. Sebastian Wards, as it was found that they required more detailed supervision than the Divisional Supervisor was able to give them.

83. House allowances were voted to the four Divisional Supervisors on the same scale as is given to the Sanitary Inspectors.

84. The number of buckets conserved rose from 6,994 in January to 7,379 in December; the increase of the previous year was from 6,334 to 6,994. The number of cesspits cleared was 117, in comparison with 219 during 1901. The number of cesspits converted into dry-earth closets was 56, as against 58 in the year preceding.

The loan of Rs. 50,000 obtained from Government in 1898 to provide for the plant of the Health Department has been reduced by annual payments, and the last instalment was paid this year and the debt wiped out.

85. A statement of the receipts and expenditure of the Department during 1902 is contained in Appendix C.

General Cemetery, Kanatta.

86. It was arranged to hand over to the Buddhist community a portion of the General Cemetery at Kanatta, in extent 2A. 2R. 14P., for their exclusive use, in the same way as portions have been given to the Church of England and the Roman Catholics. The Provincial Committee appointed under the Buddhist Temporalities Ordinance will be the managing body, and the conditions of the transfer have been agreed on.

87. The work of tracing the grants of plots of ground in this cemetery, which had not in the past been marked in the cemetery plan, is progressing, and 59 lots have been traced during the year.

88. A few amendments have been made in the cemetery by-laws, and a revised distribution of duties arranged between the cemetery-keeper and the sexton.

IX.—Municipal Magistrate's Court.

89. The number of cases disposed during the year was 16,430, in comparison with 13,067 for 1901 and an average of 10,424 for the five previous years. The number of persons charged in these cases was 17,827, as compared with 14,286 for 1901 and an average of 11,478 for the five previous years. The amount of fines recovered was Rs. 29,713·94, as compared with Rs. 31,182·47 for 1902 and an average of Rs. 30,022·29 for the five previous years.

A classified statement in the form prescribed by the Attorney-General is contained in Appendix D. Weekly statements of prosecutions are submitted by the Inspectors and examined by me. Prosecutions for rethatching buildings are carefully watched, and applications for time to tile them considered.

90. Mr. E. F. Ondatjie performed duties as Additional Municipal Magistrate during the year.

X.—MISCELLANEOUS.

City Analyst, &c.

91. Since Mr. Cochran retired in 1900 the duties of Gas Inspector, City Analyst, and Electrical Adviser have been discharged by Mr. Cockerill. The Council, after considering the question of filling Mr. Cochran's post, asked Government to obtain from England an officer to undertake this combination of duties, or, if that was impossible, one to discharge the duties of Gas Inspector and City Analyst. Subsequently Government informed the Council that it was proposed to obtain from England a qualified Electrical Adviser on a salary of Rs. 10,000 rising to Rs. 12,000, and offered his services to the Council as well, on the Council paying a contribution of Rs. 2,000 per annum and one-fifth of his ultimate pension. These terms were agreed to after some discusssion as to the exact nature of the services he was to give to the Council, and Government has now been requested to obtain for the Council an officer for the combined posts of Gas Inspector and City Analyst.

92. The Council's laboratory, which had been removed from Mr. Cochran's house to the gas testing room, was partially re-established for the analysis of water at Mr. Cockerill's house, and an estimate has been called for, but not yet furnished, for completely re-establishing it.

93. Mr. Paulusz, the City Analyst's Assistant, who had been transferred to the Sanitary Department, left the Council's service in November, having secured an appointment in the Straits Settlements.

Assessment Surveys.

94. The work of revising the survey of Colombo for the purposes of assessment has been carried on throughout the year, and will probably be completed in 1903. It is being done by three surveyors, whom the Surveyor-General was good enough to select and supervise, and when complete the survey should be of considerable value.

Objections to Assessment.

95. The system of dealing with objections to assessments by endeavouring to ascertain the actual rents, and in the case of unrented buildings obtaining the opinion of a competent valuer, has been carried on throughout 1902. The chief obstacle lies in the fact that landlords and tenants of the less reputable sort frequently combine in order to understate the actual rent paid. It is difficult to see how this can be overcome. The number of objections dealt with was 248, of which 7 cases were taken into court, 4 of which were decided against the Council.

Arrears of Assessment.

96. The work of recovering the arrears in the Mutwal A and Maradana Divisions by seizing the properties for the whole of the outstanding arrears was continued, and it was subsequently extended to the Pettah and St. Sebastian Wards.

The following figures show the progress made :—

Mutwal A Ward.

	1897.	1898.	1899.	1900.	1901.	Total.
	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
Outstanding on 31st December, 1901 ...	667 91	2,722 58	2,777 25	5,842 38	5,697 85	17,707 97
Outstanding on 31st December, 1902 ...	340 75	1,927 63	751 74	2,726 3	3,254 66	9,000 81
Recoveries	327 16	794 95	2,025 51	3,116 35	2,443 19	8,707 16

Maradana Ward.

	1897.	1898.	1899.	1900.	1901.	Total.
	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
Outstanding on 31st December, 1901 ...	—	—	3,281 31	21,752 28	25,470 37	50,503 96
Outstanding on 31st December, 1902 ...	—	—	216 99	603 6	2,103 29	2,923 34
Recoveries	—	—	3,064 32	21,149 22	23,367 8	47,580 62

Pettah Ward.

	1901. Rs. c.
Outstanding on 2nd May, 1902, first date of seizure	20,110 5
Outstanding on 31st December, 1902	13 20
Recoveries	20,096 85

St. Sebastian Ward.

	1901.	1902.	Total.
	Rs. c.	Rs. c.	Rs. c.
Outstanding on 6th May, 1902, first date of seizure	6,357 74	6,092 48	12,450 22
Outstanding on 31st December, 1902	134 77	3,159 78	3,294 55
Recoveries	6,222 97	2,932 70	9,155 67

Assessment Collector of Mutwal.

97. The collector of Mutwal A has in the past been paid an exorbitant commission of 20 per cent. on his recoveries. This high rate was allowed on account of the supposed difficulties in recovering the tax in the fishers' quarters. As these difficulties have proved to be more imaginary than real, his commission has been reduced for the future to 10 per cent.

Assessment Collector of St. Sebastian.

98. The collector of St. Sebastian Ward, who had been detected in the commission of certain irregularities, involving fortunately no pecuniary loss to the Council, was punished by a deduction being made from his commission.

Sales of Property for Default.

99. The number of sales in default during the year was twenty-eight, the Council being the purchaser in twenty-five cases. In every instance where the Council purchased the sales were subsequently cancelled on payment of the arrears, the object being to recover the taxes and not to deprive owners of their property. Special arrangement will be made in future for surveys being made in the case of sales where the purchaser is not the Council. In two of these cases during 1902 the sales were not confirmed, the arrears having been paid up.

100. The Head Clerk of the Assessment Department was found to be unfit for such a responsible post, and was transferred to other employment in November.

101. The Council has in the past lost various sums of outstanding arrears on properties acquired by Government for public purposes. An attempt is being made to arrange with the Government Agent for notice to be given to the Council of the intended acquisition of lands in sufficient time to enable the arrears to be collected before the acquisition is completed.

Commutation.

102. Lists of houses, based on the Census list, were prepared by the division officers and schedules served at every house, and from these schedules the general lists for 1902 were prepared. After the close of the voluntary payments and the calling out of labour there remained 20,606 defaulters. Warrants were issued against every one of these as required by the Ordinance, and at the close of the year there remained only 156 persons unaccounted for.

The following is a comparison of the warrant work in 1901 and 1902 :—

	Warrants issued.	No. accounted within the Year.	No. struck off.	Balance.
1901	18,659	2,663	15,119	877
1902	20,606	19,832	618	156

This shows a considerable improvement in the work, while the total collection on account of this tax rose from Rs. 90,098 in 1901 to Rs. 98,258 in 1902.

103. The Government Agent having appointed a Vidane Arachchi for St. Sebastian Ward, he was made division officer as well. The Vidane Arachchies are now division officers in every ward.

Vehicles and Animals Tax.

104. The registers for the vehicles and animals tax were prepared from schedules served by the division officers at every house at the same time as they served the commutation tax schedules. The checking of payments was better done than formerly, but there is still room for improvement. An incompetent clerk in this Department was retired on pension during the year.

Warrants for the recovery of unpaid items were issued for the first half-year in May, and for the second in August and September. At the end of the year there were no bills outstanding. The recoveries on warrants were entrusted to the Ward Inspectors, as was done last year.

Licensed Vehicles.

105. The following are the figures for the last five years :—

	No. of Hackeries First Class.	No. of Hackeries Second Class.	No. of Carriages First Class.	No. of Carriages Second Class.	No. of Jinrickshas.
Licensed in 1898 ...	197	313	194	41	1,368
Do. 1899 ...	168	171	198	17	1,351
Do. 1900 ...	167	125	202	21	1,644
Do. 1901 ...	179	89	215	26	1,907
Do. 1902 ...	198	92	170	45	2,193

Inspections were made from time to time of the condition of the vehicles that were being used, and 150 jinrickshas were noticed to be produced for plying in an unfit state. Of these, the Municipal officers reported 145, the police 2, and private parties 3. Twenty-nine carriages were also noticed to be produced for plying in an unfit state. Of these, the Municipal officers reported 28 and a private party 1. 130 jinrickshas were produced after necessary repairs had been effected, and were

inspected and passed as fit for licensing; 20 jinrickshas were not produced and could not be traced subsequently, as they were not used. All the 29 carriages were produced after proper repairs had been done to them, and passed.

Licensing of Carts.

106. The licensing of carts hitherto done by the Government Agent was undertaken by the Council during the second half of the year, and this arrangement will continue in the future.

Carriage and Jinricksha Stands.

107. An amended list of carriage and jinricksha stands was prepared and published during 1902, and a new stand provided in Dean's road.

Cattle Disease.

108. There were no cases of epizootic disease among cattle during the year. This is the first time in the course of several years that such a freedom from disease has been noticed. The measures adopted for the detection of cases as soon as they appear in any of the cattle yards and the arrangements carried out for the proper segregation of diseased and infected animals have been responsible for these satisfactory results.

Rabies.

109. Four cases of suspected rabies were reported by the police during the year, and on examination one of the dogs thus reported was found to have suffered from the disease.

Frozen Meat.

110. 541,295 lb. of frozen meat imported to Ceylon were inspected, and the inspection fees received at the rate of ½ cent per lb. amounted to Rs. 2,706·49.

Slaughter Houses.

111. The two slaughter-houses at Dematagoda and Madampitiya were regularly visited during the year, and the work of the Superintendents was found to be very satisfactory. Cattle, sheep, and pigs are slaughtered at Dematagoda, and sheep only are slaughtered at Madampitiya. 26,007 head of cattle were entered for slaughter at the Dematagoda slaughter-house during the year 1902. 2,393 diseased livers and lungs and 4 carcases of meat were rejected and destroyed during the period as being unfit for food. 36,116 sheep and 2,101 pigs were also admitted for slaughter at Dematagoda. At Madampitiya 32,591 sheep were entered for slaughter during the year, and 4 carcases of meat were destroyed as being unfit for food.

Supply of Water.

112. The average daily supply of water from the Colombo Waterworks during the year was 2,508,222 gallons, the average daily consumption, which includes water supplied to Government buildings and for other purposes, was 2,507,628 gallons. The maximum consumption was 3,342,228 gallons on the 2nd August, and the minimum consumption was 1,949,514 on the 19th August.

Municipal Clerical Service.

113. A scheme for the improvement of the Municipal Clerical Service was brought before the Council. Mr. Brohier, the retired Assistant Auditor-General, was good enough to prepare it on the lines of the Government Clerical Scheme, under which the clerks are divided into classes, each class having a fixed initial pay rising by increments until the maximum pay of the class is obtained. It was considered by the Standing Committee, and when it was laid before Council the Superintendent of Works sent in certain objections to it. The Council has now referred the matter to the Standing Committee on Finance, and Mr. Brohier has been asked to give his opinion on the Superintendent of Works' objections. It is to be hoped that a sound business-like scheme will be the final result.

Pension of Officers seconded for Service.

114. The question of the provision for the pension of Government officers seconded for service with the Council, who eventually revert to Government Service, was considered. The Government has agreed to provide the pensions, and offered the Council the alternative (1) of paying a proportion of the pension; (2) of commuting this payment by a contribution of 4 per cent. on each seconded officer's salary during the period he is employed under the Council. The latter alternative was selected. I am now in communication with Government regarding the pensions of seconded officers who may retire on pension without ever reverting to Government Service.

Investment of Funds.

115. Permission was obtained during the course of the year for the deposit at interest of a portion of the Council's money in the Chartered Bank.

Special Committees.

116. Some difficulties were experienced in getting meetings of Special Committees, meetings in twenty-five cases having fallen through for want of attendance of the necessary quorum of three members. It may be found possible, with the coming into existence of four Standing Committees instead of one, to refer to them some of the questions now dealt with by Special Committees.

Coronation of His Majesty the King.

117. The Council voted a loyal address to His Majesty the King on the occasion of the Coronation. The address was engraved on a gold plate and enclosed in a gold casket of Oriental workmanship. His Excellency the Governor was good enough to present the address, which was graciously acknowledged by His Majesty. The Council in addition voted a grant to the Victoria Memorial Eye Hospital, and other sums for feeding the poor and contributing towards the public decorations and illuminations on the occasion of the Coronation.

Welcome to His Excellency the Governor.

118. His Excellency the Governor returned to Ceylon on 25th October, and the Council presented an illuminated address to His Excellency and contributed towards the public decorations on the occasion.

Flags for Town Hall.

119. The flags ordered for the Town Hall were duly received in February.

Triennial Elections.

120. The triennial elections took place in December. There were contests in two Wards, Kotahena and Maradana, resulting in the return of the sitting members. Canvassing also went on in the Fort, Kollupitiya, and Slave Island Wards, but there was no contest at the polls. In the two former wards new members were returned, and the sitting member re-elected in Slave Island. In the other four wards the sitting members were re-elected without opposition. Certain defects in the proxy system were disclosed at the elections, proxies having been shown in some instances to have been signed with the date of signature left blank, the proxies having been subsequently filled in with dates later than those on which they were actually signed.

121. Tables of attendance at meetings of the Council, of the Standing Committee, and of the Special Committees respectively are contained in Appendix E.

122. The following are the lists of nominated members during the year and lists of the Council at the beginning of 1902 and the beginning of 1903:—

Dr. C. T. Griffin nominated 21st April in place of Dr. A. Perry, resigned.
Pestonjee Dinshaw Khan, Esq., 21st April, *vice* A. de A. Seneviratne, Esq., resigned.
John Rudd, Esq., nominated 27th May in place of Major L. F. Knollys, C.M.G., resigned.
F. H. Grinlinton, Esq., nominated 16th October, *vice* P. D. Warren, Esq., resigned.
Major A. W. de Wilton nominated 3rd September, *vice* John Rudd, Esq., resigned.
Walter Shakspeare, Esq., nominated 27th September, *vice* D. W. H. Skrine, Esq., resigned.
Robert Davidson, Esq., nominated 17th October, *vice* the Hon. Mr. Giles F. Walker, resigned.

List of Members in January, 1902.

Dr. A. Perry.
Dr. J. L. Vanderstraaten.
A. de A. Seneviratne, Esq.
The Hon. Mr. F. A. Cooper, C.M.G.
Major L. F. Knollys, C.M.G.
P. D. Warren, Esq.
D. W. H. Skrine, Esq.
The Hon. Mr. Giles F. Walker.
Charles Perera, Esq.
P. Coomaraswamy, Esq.
Chas. P. Dias, Esq.
R. H. Morgan, Esq.
Arthur Alvis, Esq.
James Peiris, Esq.
H. A. Jayawardene, Esq.
Dr. Solomon Fernando.
M. L. M. Zainudeen, Esq.

List of Members in January, 1903.

The Hon. Mr. F. A. Cooper, C.M.G.
Dr. C. T. Griffin.
Pestonjee D. Khan, Esq.
F. H. Grinlinton, Esq.
Major A. W. de Wilton.
Walter Shakspeare, Esq.
Robert Davidson, Esq.
Dr. C. W. van Geyzel.
Charles Perera, Esq.
P. Coomaraswamy, Esq.
Chas. P. Dias, Esq.
James Peiris, Esq.
H. A. Jayawardene, Esq.
Dr. Solomon Fernando.
M. L. M. Zainudeen, Esq.
The Hon. Mr. Stanley Bois.
Dr. W. H. de Silva.

122. The Councillors and Standing Committee have to be thanked for the part taken by them in Municipal affairs.

April 1, 1903.

A. S. PAGDEN,
Chairman, Municipal Council, and
Mayor of Colombo.

APPENDIX A. (Quoted in Paragraph 8.)

Statement of Receipts and Disbursements on account of the Municipal Fund from January 1 to December 31, 1902.

	Revenue.	Estimated Revenue for 1902. Rs. c.	Receipts to Dec. 31, 1902. Rs. c.
1	Commutation under Road Ordinance ...	98,000 0	98,258 0
2	Tax on vehicles and animals (under section 128 of Ord. No. 7 of 1887) ...	24,000 0	23,598 25
2a	Do, costs ...	—	525 59
3	Dog tax	3,600 0	4,427 50
3a	Do. costs ...	—	—
	Licenses.		
4	Carriages for hire ...	13,175 0	14,345 0
5	Passenger hackeries ...	536 0	603 25
6	Cart and coach	7,000 0	5,168 5
7	Boat	40 0	59 85
8	Boat—issued by Master Attendant ...	4,000 0	4,126 80
9	Gun—issued by Government Agent	200 0	1,399 59
10	To sell intoxicating liquors—issued by Government Agent	16,000 0	16,102 50
15	To sell intoxicating liquors—issued by Government Agent, arrears 1901 ...	16,492 0	16,512 0
11	Butchers	200 0	251 75
12	Coal depôts, tanneries, &c. ...	800 0	849 0
13	To slaughter cattle, sheep, and pigs (special) ...	150 0	207 93
14	To sell meat (special) ...	150 0	270 0
15	To sell fish (special) ...	250 0	335 0
16	Opium	45,150 0	45,450 0
17	Petroleum	1,900 0	2,263 0
18	Guides	130 0	162 0
19	Poison	30 0	47 50
20	Auctioneers and brokers ...	3,500 0	3,220 0
21	Stamp duty on advocates', proctors', and notaries' certificates and articles of clerkship	3,500 0	3,515 0
22	Stamp duty on licenses on arrack taverns (cross entry)	10,500 0	10,500 0
	Judicial Fines.		
23	By Municipal Magistrate	25,000 0	29,713 94
24	By Police Magistrate	25 0	59 0
	Tolls.		
25	Victoria bridge, Grandpass ...	85,000 0	85,000 0
26	Bambalapitiya ...	43,200 0	44,500 0
27	Mutwal ferry ...	1,000 0	1,800 0
28	Lock-gate	1,000 0	1,097 10
	Markets.		
29	Edinburgh, fruit and vegetable	4,000 0	4,850 88
30	Edinburgh, meat ...	5,000 0	5,692 50
31	Edinburgh, meat — lighting charges paid by stall-holders	450 0	456 74
32	St. John's fish mart ...	1,200 0	1,200 0
33	St. John's boutiques, fruit and vegetable market ...	1,308 0	1,220 0
34	St. John's fish market ...	3,000 0	3,600 0
35	Dean's road market ...	5,500 0	7,071 6
36	Dean's road market—lighting charges paid by stall-holders (cross entry) ...	1,100 0	1,070 0
37	Grandpass market ...	5,400 0	6,240 0
38	Kollupitiya market ...	600 0	781 0
39	Mohammedan meat market, Dhobies' pond ...	720 0	720 0
40	Gintupitiya street market ...	1,650 0	2,100 0
41	Gintupitiya street market—lighting charges paid by stall-holders ...	165 0	210 0
42	Slave Island market ...	3,500 0	3,360 0
43	Bambalapitiya market ...	720 0	676 0

	Expenditure.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
	I.—Establishments.		
	(i.) *Salaries:*		
1	Salaries, fixed ...	70,672 30	64,104 57
2	Pensions	7,644 60	7,074 93
3	Audit of accounts ...	1,952 0	1,952 0
	(ii.) *Contingencies.*		
4	Office contingencies ...	726 33	726 33
5	Allowances	10,042 28	8,952 2
6	Stationery	3,200 0	3,193 68
7	Furniture	350 0	262 42
8	Inspectors' uniform, &c. ...	950 0	943 50
	II.—Commutation under Road Ordinance.		
9	Commission, &c. ...	9,000 0	7,500 90
10	Refunds	350 0	228 0
	III.—Licenses and Taxes.		
	(i.) *Dog Tax.*		
11	Commission, &c. ...	125 0	67 35
12	For capture and destruction of dogs and for dog collars ...	2,350 0	1,973 98
13	Refunds	15 0	4 66
	(ii.) *Vehicles and Animals Tax.*		
14	Commission, &c. ...	695 42	394 71
15	Tin plates and painting ...	500 0	435 27
16	Refunds	150 0	101 75
306	Branding	93 0	52 35
	(iii.) *Carriage Licenses.*		
17	Tin plates and painting ...	250 0	229 74
18	Badges and fare tables ...	900 0	897 30
307	Branding	70 0	46 11
	(iv.) *Hackery Licenses.*		
19	Tin plates	50 0	32 70
20	Badges and fare tables ...	200 0	126 0
308	Branding	12 0	7 32
	IV.—Markets.		
	(i.) *Establishment and Lighting.*		
21	Edinburgh market, keeper's salary	360 0	360 0
22	Edinburgh market, assistant market keeper at Rs. 15 per month	180 0	180 0
23	Edinburgh market, coolies' wages (4)... ...	600 0	580 0
24	St. John's market, overseer's salary	120 0	120 0
25	St. John's market, cooly's wages	150 0	130 0
26	Kollupitiya market, cooly's wages	150 0	120 0
27	Dean's road market, keeper's salary	360 0	360 0
28	Dean's road market, coolies' wages	660 0	640 0
29	Dean's road market lighting —recoverable from stall-holders (cross entry) ...	1,100 0	987 50
30	Gintupitiya street market, cooly's wages ...	150 0	120 0
31	Slave Island market, keeper's salary	480 0	480 0
32	Slave Island market, cooly's wages	150 0	120 0
33	Mohammedan meat market, cooly's wages ...	150 0	127 50
34	Bambalapitiya market, cooly's wages	150 0	120 0
35	Kollupitiya and Bambalapitiya markets, keeper's salary	240 0	240 0

	REVENUE.	Estimated Revenue for 1902. Rs. c.	Receipts to Dec. 31, 1902. Rs. c.
	Slaughter Houses.		
44	Dematagoda, slaughtering fees	17,500 0	18,043 11
45	Do. feeding fees ...	20,000 0	20,922 39
46	Do. sale of blood ...	200 0	200 0
47	Do. sale of manure...	100 0	46 0
48	Do. cost of gas to stove	300 0	315 15
49	Madampitiya, slaughtering fees ...	4,000 0	4,198 14
50	Do. feeding fees ...	4,000 0	4,202 24
51	Do. rent of trees and grass ...	300 0	336 0
52	Inspection fees of frozen meat	3,000 0	2,706 49
	Health Department.		
53	Recoveries from householders for conserving latrines ...	140,000 0	150,302 67
54	Recoveries from householders for buckets sold ...	400 0	625 0
55	Recoveries from householders for disinfectants, &c.	900 0	987 89
	MISCELLANEOUS.		
56	Trunk road (cross entry) ...	30,000 0	30,000 0
57	Tramway mileage ...	4,833 32	4,833 32
58	Rent of grass lands and other property ...	4,500 0	5,270 75
59	Racquet court fees ...	50 0	132 0
60	Galle Face, grazing fees ...	650 0	725 35
61	Victoria park, grazing fees...	500 0	456 0
62	Campbell's park, grazing fees	200 0	204 0
63	Price recreation ground, grazing fees ...	200 0	162 0
64	Fees for testing and stamping weights and measures ...	250 0	179 44
65	Fees from tennis court, Victoria park ...	30 0	45 50
66	Interest	8,500 0	8,797 19
67	Miscellaneous ...	7,500 0	9,299 30
	Sale of stores ...		521 56
	Mulct		817 49
	Town Hall fees ...		—
	Overplus for sales ...		69 25
	Sale of tender and specification forms ...		54 0
	Sale of scavenging rubbish...		—
	Deposits made by tenderers		—
	Sale of timber		342 21
	Sale of disinfectants, &c. ...		—
68	General cemeteries account	4,000 0	5,758 0
69	Lease of land opposite bridge-of-boats	360 0	216 0
70	Rent of land, Layard's broadway	250 0	339 0
71	Rent of superintendent's quarters, bridge-of-boats	700 0	1,020 0
72	Rent of dynamite magazine	50 0	50 0
73	Fees from the Hon. the Treasurer for testing kerosine oil ...	750 0	775 0
74	Payment by Government Agent for clearing Crown lands in the Fort during 1902 (cross entry) ...	160 0	160 0
76	Recovery from sureties of the late shroff ...	3,000 0	3,000 0
77	Advances of previous year adjusted	4,430 86	4,430 86
78	District Road Committee for upkeep of a portion of Narahenpitiya road ...	136 50	136 50
79	Recovery from estate of the late Shroff Adaman ...	558 28	558 28
	Guides' badge account ...	—	*66 0
	Carried forward ...	701,149 96	734,919 86

* Not in Budget.

	EXPENDITURE.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
36	Fish blocks for markets ...	100 0	6 83
37	Cost of tools and equipment...	150 0	64 75
335	Repairs to fish benches, Dean's road market ...	60 0	45 7
336	Rethatching St. John's fish mart	45 0	43 20
337	Repairs to offal and other stalls, Dean's road market...	400 0	255 47
362	Repairs to Dean's road market	245 0	200 44
363	Repairs to roof, Slave Island market	333 0	177 13
389	Dean's road market, covering gable ends of shed for basket women	682 50	401 11
408	Kollupitiya market, locked up mutton stalls ...	35 0	35 0
409	Dean's road market repairs ...	8,403 83	4 81
424	Kollupitiya market, additional fish block ...	17 60	15 88
429	Dean's road market, alterations to offal and other stalls ...	300 0	16 40
444	Mould and experimental fish block	100 0	—
	(ii.) *Upkeep and Repairs.*		
38	Repair of markets upon sub-estimates... ...	3,000 0	416 98
	V.—SLAUGHTER HOUSES.		
	(i.) *Establishment, Lighting, &c.*		
39	Dematagoda, superintendent's salary ...	1,000 0	999 96
40	Do. superintendent's jinricksha allowance ...	180 0	180 0
41	Do. salary of assistant and clerk ...	600 0	600 0
453	Do. house allowance for assistant and clerk, two months	30 0	30 0
42	Dematagoda, coolies' wages ...	1,115 0	1,108 23
43	Do. oil, carbolic acid, &c. ...	150 0	26 54
44	Madampitiya, salary of keeper,	360 0	360 0
45	Do. keeper's jinricksha allowance ...	180 0	180 0
46	Do. coolies' wages ...	240 0	240 0
47	Do. oil, carbolic acid, &c. ...	100 0	45 64
	(ii.) *Upkeep and Repairs.*		
48	Quarterly whitewashing ...	800 0	400 0
49	Levelling ground and gravelling road, &c. ...	852 0	32 71
50	Repairs to admission shed ...	3,828 0	—
51	Repairs and improvement to sheep slaughtering shed ...	576 0	—
326	Repairs of buffalo enclosure and gate, Dematagoda slaughter-house ...	107 0	79 59
425	Dematagoda slaughter-house, repairs of cooly lines ...	37 95	27 96
428	Dematagoda slaughter-house, six resters... ...	33 0	15 62
447	Slaughter-house, Dematagoda, repairs to exposing shed ...	20 43	14 88
	(iii.) *New Works.*		
52	Tripe washing pit ...	423 0	—
53	Extending sheep slaughtering shed	1,934 0	—
54	Improvements to pig slaughtering shed	393 0	—
55	Removal of trees ...	33 0	—
367	Hand cart for Dematagoda slaughter-house ...	85 0	79 96
	(iv.) *Feeding Charges, &c.*		
56	Dematagoda, feeding charges	3,850 0	3,680 3
57	Madampitiya, feeding charges	180 0	81 79
58	Tools, &c., for slaughter-houses	250 0	119 36

Revenue.	Estimated Revenue for 1902. Rs. c.	Receipts to Dec. 31, 1902. Rs. c.
Brought forward ...	701,149 96	734,919 86
Carried forward ...	701,149 96	734,919 86

	Expenditure.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
	VI.—Toll Houses and other Buildings.		
	Upkeep and Repairs.		
59	Repairs to toll-houses upon sub-estimates ...	600 0	84 27
60	Repairs to— St. John's vegetable market; St. John's boutiques ...; Guides' shelter ...; Gas testing room ...; Printing office ...; Municipal store ...; Workshop ...; Flushing tank ...	1,000 0	3 30
	VII.—Roads, Bridges, and Culverts.		
	(i.) *Establishment.*		
61	Salaries of overseers ...	6,480 0	6,415 0
62	Salaries of head overseers ...	2,200 0	1,666 64
63	Pay of watcher and coolies...	571 86	558 42
	(ii.) *Upkeep.*		
64	General upkeep of roads ...	16,500 0	16,393 62
65	Upkeep of metal roads upon sub-estimates ...	88,911 96	54,463 76
66	Upkeep of gravel roads upon sub-estimates ...	38,626 20	32,681 80
67	Upkeep of lanes upon sub-estimates ...	1,754 22	1,570 28
68	Upkeep of footways upon sub-estimates ...	633 51	343 22
69	Trunk roads (cross entry)...	30,000 0	25,230 93
70	Purchase of tools for roads...	2,000 0	1,100 37
71	Purchase of tools for other works	500 0	493 96
72	Repair of tools for roads ...	700 0	660 25
73	Repair of tools for other works ...	500 0	199 53
74	Repairs to steam rollers ...	1,600 0	1,513 93
309	Trunk roads ...	10,671 17	5,583 79
310	Extra cost of metal, Cliff House	2,146 0	2,146 0
311	Footways, Church street, Fort	2,163 24	1,445 10
312	Culvert, junction of Park street and Dawson street...	235 0	227 23
327	Repairs to culvert at junction of 1st Cross street with Prince street ...	75 0	65 83
328	Repairs to culvert at junction of Keyzer street with 3rd Cross street ...	150 0	148 46
329	Repairs to culverts at junction of Keyzer street with 2nd Cross street ...	174 0	171 98
338	Repairs of bridges, Temple road and North and South Base Line road ...	94 0	83 54
339	Footway, Main street ...	826 0	534 10
340	Pipe culvert, Ward place ...	373 0	369 72
399	Improvements to Uplands and Alutmawata roads ...	1,216 28	1,216 28
	VIII.—Drains.		
	(i.) *Upkeep and Repairs.*		
75	Conservancy of sewers and drains	3,500 0	3,265 64
341	Repairs to drain opposite 222, Grandpass ...	63 0	58 25
345	Repairs to drain, Braybrooke place	109 0	108 82
396	Repair of drain Braybrooke street	127 0	112 48
	(ii.) *New Works.*		
313	Drainage, Layard's broadway	20,362 0	12,681 97
314	Outlet drain, Jampettah street	300 0	280 58
342	Drainage, Nagalagam street	18,852 0	4,661 13
344	Drain opposite 86, Santiago street	840 0	669 13
395	Drain, Korteboam street ...	80 0	80 0
419	Granite paved drain along gala yard ...	64 0	63 92
423	Drain through 255, Demata-goda	115 0	—
441	Drain, Borella Cross road ...	230 0	—

Revenue.	Estimated Revenue for 1902. Rs. c.	Receipts to Dec. 31, 1902. Rs. c.
Brought forward ...	701,149 96	734,919 68

	Expenditure.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
	IX.—Lake and Canals.		
	(i.) *Upkeep.*		
76	Conservancy of lake ...	3,000 0	2,617 54
77	Dredging St. Sebastian canal	1,500 0	1,200 59
78	Dredging lake ...	4,000 0	548 32
79	Upkeep of Lock-gates ...	100 0	—
334	Repairs to Lock-gate, St. Sebastian ...	480 0	472 85
	(ii.) *New Works.*		
80	Cost of iron pontoon for dredger	5,117 0	—
81	Steady boat ...	4,312 0	—
	X.—Parks.		
	(i.) *Upkeep.*		
82	Upkeep of Victoria park ...	5,744 0	5,676 13
83	Do. Racquet court ...	1,272 0	1,078 49
84	Do. Jubilee fountain	120 0	77 77
85	Do. Gordon garden ...	1,386 0	1,007 10
86	Do. Galle Face esplanade	516 0	422 58
87	Do. Campbell's park...	1,469 0	1,198 65
88	Do. Price recreation ground ...	339 0	289 52
89	Do. Havelock Town park	970 0	780 13
368	Quartz gravelling the Circular road, Victoria park ...	587 25	587 25
393	Lawn mower, Havelock park	130 0	126 0
434	Earth and labour for filling Price park ...	3,026 0	2,250 49
440	Lawn mower, Victoria park...	130 0	—
	XI.—Cemeteries.		
	(i.) *Establishment, &c.*		
90	General cemetery, Kanatta, salary of keeper ...	800 0	800 0
91	House allowance of keeper...	360 0	360 0
92	General cemetery, Kanatta, salary of sexton ...	600 0	600 0
93	General cemetery, Kanatta, wages of eight coolies at Rs. 11·25 each ...	1,080 0	1,080 0
94	General cemetery, Madampitiya, salary of keeper ...	600 0	575 0
95	General cemetery, Madampitiya, wages of two coolies at Rs. 11·25 each ...	270 0	270 0
96	Contingencies ...	300 0	155 56
369	Allowance to Manuel cooly, Kanatta cemetery, for 7 months at Rs. 5 ...	35 0	—
445	Repairs to Kanatta cemetery wall	634 60	—
463	Whitewashing and painting sexton's quarters, Kanatta	112 0	—
469	Allowance to Kalakute cooly, Kanatta cemetery, for 3 months at Rs. 5 ...	15 0	5 0
	XII.—Fire Brigade.		
	(i.) *Upkeep and Repairs.*		
97	Repairs to fire stations, &c....	500 0	—
98	Pay of firemen, coolies, &c....	2,163 0	1,753 57
435	Temporary fire engine shed, Racquet court ...	394 0	347 26
436	Propping fire engine station, Kotahena ...	76 36	75 36
467	Rebuilding walls, Kotahena fire station ...	1,400 0	57 77
	XIII.—Health Department.		
99	Salaries, wages, and allowances	73,500 0	73,038 73
100	Purchase of disinfectants ...	6,000 0	5,008 50
101	Purchase of tools ...	100 0	25 0
102	Purchase of stationery, &c....	500 0	360 51
103	Repairs and maintenance of depôt buildings ...	1,300 0	—
104	Refunds	150 0	101 48
105	Hire of bulls ...	45,600 0	45,591 45
106	Repair of carts ...	10,000 0	5,812 10
107	Miscellaneous ...	4,000 0	1,254 92
108	Maintenance of roads at depôt	913 50	769 9

Carried forward ...	701,149 96	734,919 86

REVENUE.		Estimated Revenue for 1902. Rs. c.	Receipts to Dec. 31, 1902. Rs. c.
Brought forward	...	701,149 96	734,919 86
Carried forward	...	701,149 96	734,919 86

	EXPENDITURE.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
346	Upkeep of road to night soil depôt, Narahenpitiya ...	500 0	192 42
390	Repairs to floor of cattle shed, night soil depôt ...	50 0	41 57
407	Construction of night soil carts	4,200 0	—
422	Metalling Narahenpitiya road	2,564 10	2,385 5
452	Repair of road and construction of a new portion at night soil depôt, Narahenpitiya	320 0	207 78
464	Construction of culvert at night soil depôt, Narahenpitiya	19 87	—
466	Construction of new road at night soil depôt ...	1,053 0	—
468	Septic tanks at night soil depôt	2,657 0	381 80
	XIV.—SANITARY ACCOUNT.		
109	Maintenance and repair of camps	1,000 0	604 18
110	Prevention of infectious diseases	4,000 0	3,203 53
111	Expenses of disinfection ...	1,500 0	1,158 95
112	Cost of disinfectants ...	500 0	278 25
113	Repairs to ambulance carts...	230 0	10 43
347	Repairs to planked flooring boards at plague camp, Kanatta	74 6	71 92
410	Repairs to plague camp buildings, Kanatta ...	700 0	458 31
433	Alterations to ambulance cart shed	30 0	30 0
	XV.—SCAVENGING.		
114	Scavenging ...	45,000 0	43,656 81
315	Extra work done by scavenging contractor at the time of Royal visit ...	100 0	100 0
470	Experimental scavenging carts	210 0	210 0
	XVI.—LATRINES.		
115	For repair of latrines upon sub-estimates ...	630 0	—
116	Construction of 240 latrine buckets	2,400 0	2,390 40
117	Quarterly whitewashing ...	700 0	495 0
316	Screening exposed portion of Slave Island latrine ...	69 0	62 30
317	Repairs to water service of latrines	200 0	133 20
333	Cost of new water pipes, Fort latrine	36 70	36 70
348	Repairs to water service, Nagalagam street latrine ...	30 0	—
349	Corrugated iron, coir dust shed, Kew latrine ...	361 51	349 77
350	Replacing water service at Uplands latrine	275 0	251 44
351	Replacing water service at Hulftsdorp latrine ...	140 0	129 90
352	Replacing water service at Kew latrine ...	33 90	—
365	Providing coir dust sheds for public latrines ...	3,971 0	—
370	Alteration to water service, Cramer's lane latrine ...	41 20	41 20
371	Alteration to water service, St. Sebastian latrine ...	57 80	57 80
421	Latrine for fire station, Kollupitiya	110 0	—
442	Improvements, St. Thomas's latrine	35 0	—
	XVII.—PRINTING DEPARTMENT.		
118	Salaries of printers ...	1,360 20	1,360 20
119	Advertisements ...	1,000 0	971 91
	XVIII.—MISCELLANEOUS ACCOUNT.		
	Secretary's Department.		
120	Library	500 0	145 32
121	Contribution to Law Library	500 0	500 0
122	Costs in legal proceedings ...	1,000 0	932 87

Revenue.	Estimated Revenue for 1902. Rs. c.	Receipts to Dec. 31, 1902. Rs. c.
Brought forward ...	701,149 96	734,919 86
Carried forward ...	701,149 96	734,919 86

	Expenditure.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
123	Rent of site, Grandpass latrine	10 0	—
124	Guides' coats ...	60 0	35 0
125	Contribution to Volunteer band	4,000 0	4,000 0
126	Refund of fines ...	300 0	21 75
127	Refund of value of guides' badges	15 0	15 0
128	Expenses of bookbinding ...	250 0	239 58
129	Subscription to newspapers	100 0	96 0
130	Cost of peons' belts ...	35 0	3 0
131	Refund of guides' license fees	12 0	—
132	Refund of value of grazing tickets	10 0	—
133	Refund of rents, &c. ...	60 0	25 0
134	Cost of grazing tickets ...	200 0	110 50
135	Postage	100 0	15 0
136	Subscription to telephone exchange ...	125 0	125 0
137	Fees for testing kerosine oil	500 0	430 50
138	Miscellaneous ...	3,500 0	3,350 63
139	Cost of supervision of dairies outside Municipal limits ...	822 0	63 0
140	Cost of supervision of laundries outside Municipal limits	3,984 56	558 56
141	Remuneration to Mr. Nicolle as additional Inspector, St. Sebastian division ...	360 0	284 51
318	Extra clerk to assist the Audit clerk for 6 weeks at Rs. 20 per month ...	30 0	25 71
319	Gratuity to Rahaman, assistant fire engine keeper, St. Sebastian ...	100 0	62 50
330	Cost of six despatch bags ...	135 0	135 0
332	Expenses in connection with the celebration of the Coronation of King Edward VII.	6,100 0	6,068 83
353	Gratuity to G. B. Silva, fire station keeper ...	130 0	130 0
354	Extra clerk, Municipal Magistrate's Department, for 3 months	60 0	60 0
355	Remuneration to Mudaliyars for supervising dairies and laundries outside Municipal limits	400 0	—
401	Gratuity to Nagameya, widow of Manuel ...	112 50	112 50
432	Cost of reception and address of welcome to Sir J. West Ridgeway ...	1,500 0	1,149 30
460	Assessor's fee for appraisement of 5 lots of land at Mutwal for a quarry ...	311 57	311 57
461	Cost of 4-chain map of Colombo (for Medical Officer of Health) ...	75 0	—
	XIX.—Miscellaneous.		
	Works Department.		
142	Watering streets ...	9,540 0	6,892 50
143	Urgent repairs and works ...	4,500 0	4,268 45
144	Upkeep of carriage stands ...	150 0	—
145	Surveys and tracings ...	1,000 0	875 88
146	Painting garden seats at bandstand, Korteboam street...	25 0	12 9
147	Painting Church street enclosure and carriage stand	240 0	190 51
148	Constructing six hand carts...	510 0	466 96
149	Cost of clearing Crown lands in the Fort for 1902 (cross entry)	160 0	149 68
150	Watering of tramway routes	2,000 0	1,999 92
151	Constructing seven watering carts	2,450 0	2,242 56
152	Three concrete road rollers...	600 0	—
320	Extra clerk from February to December 31, 1902, at Rs. 60 per month ...	660 0	660 0
321	Gratuity to Amala Marikar, head mason ...	312 0	200 0
322	Gratuity to Manual Appu, carpenter ...	250 0	228 20

Revenue.	Estimated Revenue for 1902. Rs. c.	Receipts to Dec. 31, 1902. Rs. c.
Brought forward ...	701,149 96	734,919 86

	Expenditure.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
323	Boundary wall, Lock-gate lane	266 0	244 71
324	Tubs for palms and plants (Town Hall) ...	63 0	44 0
325	Converting existing gully to a lamp hole, &c., Reclamation road ...	61 0	47 22
331	Bookshelves, Works Department	530 0	525 71
356	Repairs, painting, &c., Town Hall	2,100 0	975 98
357	Stand of new iron safe ...	15 0	13 52
358	Catchpits, Hulftsdorp and Kuruwe streets ...	400 0	396 59
359	Acquisition of land for proposed road from Maradana to Base Line ...	9,000 0	—
360	Repairs to rubbish cart, Bankshall street ...	20 0	18 44
361	Remuneration to H. A. Martin for examining and reporting on the accounts of the Works Department for 1899	577 50	577 50
366	Painting guides' shelter ...	82 0	70 80
372	Punkah for the Assistant Engineer's office ...	26 0	22 13
373	Improvements to Temple road, Maradana ...	270 0	226 77
374	Side rails for Parsons road near level crossing ...	320 0	313 11
375	Repairs to road to Wellawatta fibre mills ...	175 0	175 0
376	Planting up Macarthy road with shade trees ...	760 0	—
391	Renewing side rails, Norris and Lotus roads ...	240 0	211 29
392	Carriage and jinricksha stand, Dean's road ...	1,544 38	—
394	Culvert, Van Rooyen and Green streets ...	372 0	363 95
397	Cost of new pumps for Works Department ...	640 0	135 72
398	Repairs to railings, Church street	320 0	319 56
400	Remuneration to Mr. H. A. Martin for examining and reporting on the accounts of the Works Department for 1900	677 50	677 50
403	Live fence to enclose ground No. 2, Hulftsdorp ...	50 0	—
406	Cross road from Cemetery street to Buddhist burial ground	730 0	—
411	Painting No. 2, Hulftsdorp street	64 0	57 42
412	Repairs to Galle Face walk retaining wall ...	740 0	469 82
413	Propping up roof of workshop	82 0	63 17
420	Gully, Parsons road ...	47 50	—
431	Laying mains under double culvert, Serpentine road ...	150 0	—
438	Repair of members' carriage shed	139 0	43 79
439	Filling Silversmith street quarry	297 0	296 82
443	Widening of entrance of Seabeach road ...	1,109 76	170 42
446	Rebuilding retaining wall, Galle Face ...	348 0	50 0
451	Alteration to catchpit, Modara street	48 30	—
455	Repairs, &c., to No. 2, Hulftsdorp street ...	147 60	—
459	Remuneration to Mr. H. A. Martin for examining and reporting on the accounts of the Works Department for 1901	780 0	780 0
462	Planting trees near Mr. Bois's premises, Hunupitiya ...	19 53	—
	XX.—Victoria Bridge Account.		
153	Contribution payable to Government	8,000 0	8,000 0
	Carried forward ...	701,149 96	734,919 86

Revenue.	Estimated Revenue for 1902. Rs. c.	Receipts to Dec. 31, 1902. Rs. c.
Brought forward ...	701,149 96	734,919 86
Carried forward ...	701,149 96	734,919 86

Expenditure.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
XXI.—Refund of Loan and Interest.		
154 Refund of loan to Government and interest ...	10,400 0	10,400 0
XXII.—Sanitation and Drainage.		
155 For expenditure on sub-estimates under this head (cross entry) ...	10,500 0	60 28
Re-votes.		
Estimate No. 23 of 1901: Edinburgh market, lighting ...	297 79	116 63
Estimate No. 26 of 1901: St. John's market, lighting ...	67 50	41 0
Estimate No. 29 of 1901: Kollupitiya market, lighting ...	2 20	—
Estimate No. 32 of 1901: Dean's road market, lighting ...	347 90	132 24
Estimate No. 34 of 1901: Gintupitiya market, lighting ...	61 75	12 25
Estimate No. 37 of 1901: Slave Island market, lighting ...	102 25	18 0
Estimate No. 41 of 1901: Bambalapitiya market, lighting ...	105 50	26 50
Estimate No. 50 of 1901: Dematagoda slaughter-house, lighting	274 0	120 50
Estimate No. 84 of 1901: Conservancy of lake	901 71	870 0
Estimate No. 184 of 1901: Refund of security	2,473 1	2,473 1
Estimate No. 214 of 1901: Photographs of the reading of the Proclamation of the Accession of King Edward VII. ...	270 0	250 0
Estimate No. 265 of 1901: Gratuity to M. E. Silva, peon ...	65 0	65 0
Estimate No. 33 of 1899: Dean's road market, extension of lighting	556 94	—
Estimate No. 137 of 1899: Purchase of a bookcase	300 0	—
Estimate No. 27 of 1901: St. John's market, vegetable trays ...	215 0	185 69
Estimate No. 44 of 1901: White tiling one meat stall, Slave Island market	30 34	28 70
Estimate No. 45 of 1901: Iron brackets, Dean's road market ...	479 64	428 30
Estimate No. 178 of 1901: Water service, Mohammedan meat market	75 0	69 83
Estimate No. 229 of 1901: Locked up mutton stalls, Kollupitiya market	474 0	470 28
Estimate No. 258 of 1901: Repair of fish benches, Dean's road market	62 0	61 71
Estimate No. 259 of 1901: Repair of fish benches, Kollupitiya market	76 80	70 90
Estimate No. 46/1 of 1901: Repair of Dean's road market ...	16 7	5 4
Estimate No. 46/2 of 1901: Repair of St. John's market ...	75 0	45 14
Estimate No. 46/3 of 1901: Repair of Cramer's lane market ...	330 0	321 83
Estimate No. 46/4 of 1901: Repair of Gintupitiya street market ...	805 0	789 7
Estimate No. 46/5 of 1901: Repair of Grandpass market ...	202 0	186 69
Estimate No. 46/6 of 1901: Repair of Kollupitiya market ...	178 0	142 50
Estimate No. 46/7 of 1901: Repair of Bambalapitiya market ...	202 0	174 0
Estimate No. 46/8 of 1901: Repair of Slave Island market ...	586 0	569 62
Estimate No. 46/9 of 1901: Repair of Dean's road market ...	372 59	356 90
Estimate No. 230 of 1901: Repairs to cooly lines, Dematagoda slaughter-house ...	35 18	28 92
Estimate No. 58 of 1901: Quarterly whitewashing slaughter-houses ...	93 35	93 35
Estimate No. 62/1 of 1901: Repair of Wellawatta toll house ...	39 43	18 34
Estimate No. 62/2 of 1901: Repair of Urugodawatta toll house ...	27 91	24 84
Estimate No. 62/3 of 1901: Repair of Drawbridge toll house ...	48 34	30 44
Estimate No. 62/4 of 1901: Repair of Lock-gate toll house ...	25 8	17 70

Revenue	Estimated Revenue for 1902. Rs. c.	Receipts to Dec. 31 1902. Rs. c.
Brought forward ...	701,149 96	734,919 86
Carried forward ...	701,149 96	734,919 86

Expenditure	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
Estimate No. 62/5 of 1901 : Repair of Dematagoda toll house ...	1 58	1 44
Estimate No. 62/6 of 1901 : Repair of Welikada toll house ...	19 88	19 48
Estimate No. 62/7 of 1901 : Repair of Narahenpitiya toll house ...	3 85	2 31
Estimate No. 62/8 of 1901 : Repair of Bambalapitiya toll house ...	29 48	12 57
Estimate No. 63/1 of 1901 : Repair of St. John's road boutiques ...	322 0	298 87
Estimate No. 63/3 of 1901 : Repair of gas testing room ...	68 0	67 22
Estimate No. 63/4 of 1901 : Repair of printing office ...	69 0	40 59
Estimate No. 63/5 of 1901 : Repair of Municipal store	139 0	110 42
Estimate No. 63/6 of 1901 : Repair of workshop	378 0	337 35
Estimate No. 63/7 of 1901 : Repair of flushing tank ...	15 0	—
Estimate No. 68 of 1901 : Lighting metal and gravel heaps ...	156 69	113 85
Estimate No. 69/20 of 1901 : Metalling Gasworks street ...	1,296 87	1,288 16
Estimate No. 69/24 of 1901 : Metalling Alutmawata road ...	121 94	112 0
Estimate No. 69/28 of 1901 : Metalling Layard's broadway ...	3,821 7	3,762 78
Estimate No. 69/36 of 1901 : Metalling Darley road ...	2,076 62	1,881 42
Estimate No. 69/37 of 1901 : Metalling Dean's road ...	505 80	296 37
Estimate No. 69/38 of 1901 : Metalling Panchikawatta road...	1,388 10	1,288 52
Estimate No. 69/41 of 1901 : Metalling Symond's road ...	533 76	490 81
Estimate No. 69/48 of 1901 : Metalling Parson's road ...	540 7	519 93
Estimate No. 69/55 of 1901 : Metalling Laurie's road ...	851 57	780 1
Estimate No. 69/57 of 1901 : Metalling Hulftsdorp street ...	1,202 22	1,189 33
Estimate No. 70/5 of 1901 : Gravelling York street ...	75 40	75 40
Estimate No. 70/31 of 1901 : Gravelling School lane ...	151 80	61 83
Estimate No. 70/39 of 1901 : Gravelling Lillie street ...	100 80	96 76
Estimate No. 71/1 of 1901 : Gravelling Baptist Chapel lane ...	44 64	43 92
Estimate No. 71/2 of 1901 : Gravelling Cafferman's lane ...	74 40	73 68
Estimate No. 71/4 of 1901 : Gravelling Siripina lane ...	41 13	9 64
Estimate No. 71/7 of 1901 : Gravelling Drieberg's lane ...	29 70	29 17
Estimate No. 71/8 of 1901 : Gravelling Ketawalamulla lane ...	165 98	—
Estimate No. 71/9 of 1901 : Gravelling Barracks lane ...	61 99	59 46
Estimate No. 72/1 of 1901 : Gravelling Queen street footway ...	133 0	125 72
Estimate No. 72/2 of 1901 : Gravelling York street footway ...	94 50	65 64
Estimate No. 72/3 of 1901 : Gravelling St. John's road footway	37 50	35 76
Estimate No. 72/4 of 1901 : Gravelling Gintupitiya street footway	191 40	26 26
Estimate No. 72/5 of 1901 : Gravelling Dam street footway ...	24 75	24 75
Estimate No. 72/6 of 1901 : Gravelling Ambalama road ...	17 69	16 27
Estimate No. 73 of 1901 : Trunk road to Grandpass ...	575 35	561 62
Estimate No. 73 of 1901 : Trunk road to Mattakkuliya ...	423 80	423 80
Estimate No. 79 of 1901 : Repairs to Dean's road paved footways...	222 33	139 50
Estimate No. 192 of 1901 : Improvement of road through Uplands	4,449 50	4,449 17
Estimate No. 231 of 1901 : Rebuilding culvert, 3rd Division, Maradana	259 0	238 53
Estimate No. 232 of 1901 : Repairs to culvert, 2nd Cross street ...	14 22	11 49

Revenue.	Estimated Revenue for 1902. Rs. c.	Receipts to Dec. 31, 1902. Rs. c.
Brought forward ...	701,149 96	734,919 86
Carried forward ...	701,149 96	734,919 86

Expenditure.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
Estimate No. 260 of 1901: Road, Captain's Garden ...	2,255 0	—
Estimate No. 261 of 1901 : Repairs to Cross road from Cemetery street to burial ground, Kotahena	100 0	—
Estimate No. 80 of 1901: Drainage of Gasworks street ...	148 13	147 84
Estimate No. 198 of 1901 : Improvement of drainage, Sea street (balance)	467 99	—
Estimate No. 200 of 1901 : Drainage, Church street, Fort ...	539 85	539 85
Estimate No. 201 of 1901 : Gullies, &c., Prince street, Fort ...	300 0	—
Estimate No. 202 of 1901 : Drainage of a section of Kollupitiya road	3,649 2	3,514 56
Estimate No. 163 of 1901 : Repairing built drain, Silversmith street	299 42	216 58
Estimate No. 165/1 of 1901 : Repair of side drain, Galpotta street	695 0	588 60
Estimate No. 165/3 of 1901 : Repair of side drain, Barber street	189 0	166 75
Estimate No. 165/5 of 1901 : Repair of side drain, 2nd Division, Maradana	509 70	392 69
Estimate No. 165/6 of 1901 : Repair of side drain from Steuart lane to the lake through Mr. Vane's property	161 0	3 34
Estimate No. 235 of 1901 : Covering drain, Union place ...	38 25	24 0
Estimate No. 237 of 1901 : Gully and sewer, Hulftsdorp street ...	31 37	24 0
Estimate No. 262 of 1901 : Rebuilding drain opposite 6, Panchikawatta	155 0	152 32
Estimate No. 161/2 of 1901 : Improvement and drainage of Sea street	6,980 67	4,225 86
Estimate No. 263 of 1901 : Repairs to Lock-gate, St. Sebastian canal	38 91	32 43
Estimate No. 94 of 1901 : Filling Price recreation ground ...	414 50	413 51
Estimate No. 238 of 1901 : Cast iron seats, Havelock Town park ...	482 0	454 89
Estimate No. 239 of 1901 : Gravelling roads, Kanatta cemetery	695 51	667 61
Estimate No. 240 of 1901 : Whitewashing and painting sexton's quarters, Kanatta ...	11 38	—
Estimate No. 264 of 1901 : Repairs to wall, Kanatta cemetery ...	246 0	240 3
Estimate No. 208 of 1901 : First cost of buildings and appliances, fire brigade	32,607 50	10,246 1
Estimate No. 102/2 of 1901 : Repairs to fire station, Fort ...	42 45	28 85
Estimate No. 102/4 of 1901 : Repairs to fire station, Kotahena...	87 80	63 39
Estimate No. 102/5 of 1901 : Repairs to fire engine shed and cooly lines, Kollupitiya ...	66 6	59 62
Estimate No. 102/6 of 1901 : Taking down St. Sebastian fire station	100 0	86 79
Estimate No. 241 of 1901 : Purchase of hose for manual fire engines	1,477 0	1,278 35
Health Department.		
Estimate No. 108 of 1901 : Repair and maintenance of depôt buildings	480 0	354 91
Estimate No. 112 of 1901 : Repairs of carts	129 22	105 48
Estimate No. 115 of 1901 : Constructing new road, night soil depôt ...	81 46	22 49
Estimate No. 115 of 1901 : Upkeep of roads, night soil depôt ...	97 76	70 48
Sanitary Account.		
Estimate No. 211 of 1901 : Repairs to plague camp No. 1 ...	200 97	12 89
Estimate No. 212 of 1901 : Repairs to plague camp No. 2 ...	44 29	—
Estimate No. 116 of 1901 : Rethatching plague camp cooly lines	52 74	49 66

Revenue.	Estimated Revenue for 1902. Rs. c.	Receipts to Dec. 31, 1902. Rs. c.
Brought forward ...	701,149 96	734,919 86
Carried forward ...	701,149 96	734,919 86

Expenditure.	Estimated Expenditure for 1902. Rs. c.	Disbursements Dec. 31, 1902. Rs. c.
Latrines.		
Estimate No. 122/2 of 1901: Repairs to Lock-gate latrine ...	4 0	—
Estimate No. 122/3 of 1901: Repairs to two seats, Glenie street latrine	21 0	—
Estimate No. 122/4 of 1901: Repairs to Modara latrine ...	33 0	27 81
Estimate No. 122/5 of 1901: Repairs to St. Thomas's latrine ...	62 70	38 54
Estimate No. 122/6 of 1901: Repairs to St. John's latrine ...	79 0	30 73
Estimate No. 122/7 of 1901: Repairs to Fort latrine ...	27 50	2 69
Estimate No. 122/8 of 1901: Repairs to Beira latrine ...	67 0	40 4
Estimate No. 122/9 of 1901: Repairs to Hulftsdorp latrine ...	11 0	7 96
Estimate No. 122/10 of 1901: Repairs to Kew latrine ...	17 0	14 50
Estimate No. 122/11 of 1901: Repairs to Nagalagam street latrine	77 81	37 94
Estimate No. 122/12 of 1901: Repairs to Dean's passage latrine...	34 0	33 70
Estimate No. 122/13 of 1901: Repairs to Gasworks street latrine	6 40	6 25
Estimate No. 122/14 of 1901: Repairs to Cramer's lane latrine ...	33 0	31 34
Estimate No. 123 of 1901: Quarterly whitewashing latrines	147 44	126 17
Miscellaneous.		
Estimate No. 156 of 1901: Setting back boundary wall, Malay street ...	267 86	249 16
Estimate No. 157 of 1901: Laying gas pipes and fitting lamp at guides' shelter ...	133 62	—
Estimate No. 158 of 1901: Acquisition of land for reclamation of lake at Vauxhall street ...	600 0	—
Estimate No. 226 of 1901: Boundary wall, Alutmawata ...	16 91	12 88
Estimate No. 228 of 1901: Cart for removal of diseased cattle ...	500 0	275 5
Estimate No. 250 of 1901: Additional accommodation for workshop and stores ...	1,962 62	1,880 77
Estimate No. 251 of 1901: New iron safe, Superintendent of Works Department ...	300 0	297 50
Estimate No. 253 of 1901: Improvement of guides' shelter ...	240 0	234 18
Estimate No. 256 of 1901: Rails and fence, MacCarthy place ...	208 77	208 77
Estimate No. 257 of 1901: Fixing water indicators ...	106 0	102 56
Estimate No. 267 of 1901: Repairs to house No. 2, Hulftsdorp street	129 24	76 59
Estimate No. 268 of 1901: Filling pit near 58, Blomendahl street...	122 50	107 8
Estimate No. 70/29 of 1901: Gravelling Reservoir road, Dematagoda road to reservoir ...	3 14	—
Estimate No. 70/54 of 1901: Gravelling Havelock road, Dickman's road to reservation ...	179 96	115 57
Estimate No. 229 of 1898: Erection of signboards on all streets and lanes notifying hours of scavenging	488 26	254 84
Estimate No. 192/9 of 1899: Improvement of Old Moor street	284 86	—
Estimate No. 65/28 of 1900: Metalling Cheku street ...	111 97	111 85
Estimate No. 66/28 of 1900: Gravelling Park street ...	260 57	259 28
Estimate No. 76 of 1900: Drainage scheme, Maradana district ...	15,000 0	4,665 47
Estimate No. 163 of 1900: Cleaning and painting Edinburgh meat market	1,382 0	1,185 0
Estimate No. 164 of 1900: Repair of floor, Edinburgh meat market	673 45	671 98

Revenue.	Estimated Revenue for 1902. Rs. c.	Receipts to Dec. 31, 1902. Rs. c.
Brought forward ...	701,149 96	734,919 86
Total ...	701,149 96	734,919 86

Expenditure.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
Estimate No. 167 of 1900 : Alteration to shed for basket women, Dean's road market ...	113 87	76 64
Estimate No. 209 of 1900 : Repair to sexton's quarters, Kanatta ...	26 85	—
Estimate No. 211 of 1900 : Coir dust shed for a public latrine ...	140 1	140 1
Estimate No. 215 of 1900 : Cost of flagstaff and flag for Town Hall	153 0	46 68
Estimate No. 199 of 1900 : Alteration to lighting of Bambalapitiya market	170 0	—
	872,613 29	632,901 32
Balance	—	102,018 54
Total ...	872,613 29	734,919 86

ADVANCE ACCOUNT.

Revenue.	Receipts to Dec. 31, 1902. Rs. c.
Advance Account	111,833 81
Balance	21,352 6
	133,185 87

Expenditure.	Disbursements to Dec. 31, 1902. Rs. c.
Advance Account	133,185 87
Advance Account, breaking metal ...	59 50

ASSESSMENT ACCOUNT.

Revenue.	Estimated Revenue for 1902. Rs. c.	Receipts to Dec. 31, 1902. Rs. c.
1 Consolidated rate under section 12 of Ordinance No. 7 of 1886—arrears of 1897 ...	500 0	539 25
2 Do. do. 1898	2,500 0	2,242 59
3 Do. do. 1899	5,500 0	3,938 0
4 Do. do. 1900	30,000 0	31,696 94
5 Do. do. 1901	150,000 0	111,626 77
6 Do. current (including 4th quarter, 1902)	350,000 0	319,220 67
7 Costs	13,000 0	20,304 62
8 Military contribution for lighting Fort	1,701 0	1,701 84
9 Sale of water ...	180,000 0	168,114 26
10 Interest	4,000 0	11,012 97
11 Costs on recovery of dues for sale of water ...	150 0	103 10
12 Miscellaneous ...	50 0	—
13 City Analyst's fees ...	100 0	360 51
14 Fees for registering mortgage bonds	20 0	57 50
Carried forward ...	737,521 0	670,919 2

Expenditure.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
1 Annuity for waterworks	130,000 0	130,000 0
2 Maintenance of police ...	60,000 0	60,000 0
3 Lighting public streets (gas)	97,000 0	90,480 60
4 Salaries, fixed ...	24,187 50	20,388 6
5 Pensions	6,456 0	5,959 64
6 Audit of accounts ...	1,952 0	1,952 0
7 Allowance to Gas Inspector...	900 0	900 0
8 Stationery	450 0	361 6
9 Furniture	50 0	7 1
10 Salaries of printers ...	1,360 20	1,360 20
11 Advertisements ...	1,000 0	768 40
12 Commission to collectors ...	10,000 0	8,700 46
13 House numbers & street boards	1,500 0	21 40
14 Refund of consolidated rate...	700 0	63 82
15 Lighting latrines with gas ...	2,000 0	1,808 5
16 Refund of water-rate ...	200 0	8 65
17 Costs in legal proceedings ...	1,000 0	803 50
18 Extension of lighting and water service ...	40,000 0	*2,960 48
19 Postage	100 0	—
20 Miscellaneous ...	650 0	550 69
21 Arc lighting of Fort (thirty lamps)	17,100 0	15,372 20
22 Shifting of lamps, repairs to gas fittings, standposts, &c.	4,000 0	326 81
23 Cost of assessment surveys ...	10,000 0	7,479 76
24 Edinburgh market, lighting ...	1,300 0	1,252 71
25 St. John's market, lighting ...	500 0	440 0
26 Kollupitiya market, lighting...	12 0	0 98
27 Dean's road market, lighting...	1,828 0	1,048 9
28 Gintupitiya street market, lighting	170 0	138 75
29 Slave Island market, lighting	264 0	175 50
30 Bambalapitiya market, lighting	360 0	261 0
31 Dematagoda, lighting ...	1,500 0	1,124 0
32 Lighting heaps ...	2,500 0	2,052 8
33 Erecting a standpost at Borella Cross road ...	339 53	339 53

* Lighting, Rs. 1,075 ; Water, Rs. 1,885·48.

Revenue.	Estimated Revenue for 1902. Rs. c.	Receipts to Dec. 31, 1902. Rs. c.
Brought forward ...	737,521 0	670,919 2
Total ...	737,521 0	670,919 2

Expenditure.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
34 Cost of laying gas to Grandpass market ...	392 75	—
35 Cost of laying gas to Mohammedan meat market ...	243 50	—
36 Cost of gas mains and lamps to Serpentine road ...	9,450 0	4,410 0
37 Cost of gas mains and lamps from Kollupitiya road to Laurie's lane ...	850 0	—
38 Cost of gas extension to Uplands	900 0	—
39 Cost of water extension to Uplands	2,214 0	—
40 Accommodation for Municipal offices	60,000 0	—
41 Damage to gas mains in Seabeach road ...	250 0	—
42 Drainage scheme, Maradana district (balance) ...	25,309 0	—
43 Contribution to Government for widening Seabeach road	17,000 0	17,000 0
44 New gate, &c., assessment office	24 30	20 86
45 High power lamp over gate, Dean's road market ...	236 0	—
Re-votes.		
Estimate No. 23 of 1901 : Proposed installation of incandescent gas...	59,960 0	46,080 0
Estimate No. 27 of 1901 : Extension of incandescent lighting to unlit streets	78,731 75	78,236 85
Estimate No. 29 of 1901 : Chemicals, &c., required by the City Analyst	500 0	—
Estimate No. 30 of 1901 : Cost of laying larger water mains in the Fort ...	20,000 0	18,561 5
	695,440 53	521,414 19
Balance	—	149,504 83
Total ...	695,440 53	670,919 2

BALANCES ON DECEMBER 31, 1902.

	Rs. c.	Rs. c.	Rs. c.
Balance, General Account	—	102,018 54	
Less Advance Account ...	21,352 6		
Less Advance Account, metal	59 50		
		21,411 56	
			80,606 98
Balance on December 31, 1901, including Rs. 30,000 in fixed deposit		—	189,827 14
Total General Account ...		—	270,434 12
Balance, Assessment Account		149,504 83	
Balance on December 31, 1901, including Rs. 200,000 in fixed deposit...		557,093 65	
			706,598 48
Total Balance ...		—	977,032 60

EXPENDITURE on Estimate No. 65 (Rs. 75,707·05).—Amount upon Sub-Estimates for Metal Roads.

Expenditure. Metal Roads.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
156 Chatham street, from York street to Flagstaff street ...	1,683 70	940 34
157 Chatham street east, from York street to Norris road	1,032 57	1,032 29
158 Police Station new road, from Norris road to Galle Face road	441 4	—
159 York street, from Norris road to Prince street ...	2,145 60	2,088 59
160 Bankshall street, from St. John's road to Main street	1,408 5	1,381 67
161 First Cross street, from Reclamation road to Norris road	1,076 52	1,051 15
162 Second Cross street, from Bankshall street to Norris road...	1,057 90	1,049 43
163 Third Cross street, from Main street to Prince street ...	558 75	—
164 Fourth Cross street, from Main street to Norris road ...	1,221 80	1,221 80
165 Fifth Cross street, from Main street to Norris road ...	432 10	417 65
166 Keyzer street, from Front street to Fourth Cross street	1,323 12	1,320 85
167 Norris road, from Lotus road to Front street ...	1,639 0	1,167 46
168 Reclamation road, from Main street to St. John's road ...	1,892 30	1,873 10
169 St. John's road, from Main street to Seabeach road ...	704 2	684 65

	Expenditure.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
	Metal Roads—*contd.*		
170	Kuruwe street, from Messenger street to Silversmith street	313 79	310 28
171	Gasworks street, from Main street to Norris road ...	1,390 17	—
172	Old Moor street, from Dam street to Kuruwe street ...	1,460 20	1,433 62
173	Old Moor street extension ...	1,877 40	1,822 30
174	Road leading to Trinity Church, St. Sebastian ...	316 62	—
175	Saunders place, from Dam street to St. Sebastian Hill	1,650 17	685 35
176	St. Sebastian street, from Dam street to St. Sebastian Hill	856 75	841 89
177	Cheku street, from Wolfendahl street to Gintupitiya street	1,013 20	995 93
178	Kuruwe street, from Old Moor street to Messenger street	267 30	—
179	Gintupitiya street, from Sea street to Cheku street ...	149 0	148 2
180	Seabeach road, from St. John's road to Sea street ...	1,771 61	1,757 9
181	Barber street, from Green street to Layard's broadway	702 68	683 23
182	Layard's broadway, from Barber street to St. Joseph's st.	4,097 50	—
183	Madampitiya road, from Drawbridge to Blomendahl road	1,434 12	1,433 97
184	Mattakkuliya Church road, from Ferguson's road to Mill road	1,045 98	1,036 93
185	Skinner's road north, from Galpotta street to Armour street	1,229 25	1,227 59
186	St. James's street, from Mutwal road to Blomendahl st.	1,059 39	1,053 87
187	Wall's lane, from Alutmawata road to Blomendahl road ...	372 50	372 50
188	Armour street, from Barber street to Silversmith street	1,758 20	1,736 3
189	Kuruwe street, from Messenger street to Barber street	267 30	266 27
190	De Waas lane, from Grandpass road to Canal ...	232 44	231 51
191	Mill street, from Belmont street to Ferry street ...	196 68	—
192	Silversmith lane, from Hulftsdorp street to Vincent street	178 80	—
193	Silversmith street, from Hulftsdorp street to Armour street	1,734 36	1,714 29
194	Skinner's road south, from Armour street to Canal ...	1,373 18	1,323 73
195	Darley lane, from Union place to Dean's road ...	393 36	391 3
196	Dematagoda road, from Maradana road to North and South Base Line road ...	2,212 65	2,212 65
197	Dean's road, from Maradana road to Rudd's lane ...	508 62	—
198	North and South Base Line road, from Urugodawatta road to Dematagoda ...	4,697 97	4,218 4
199	Wolfendahl street ...	1,862 50	1,829 34
200	Rudd's lane, from Dean's road to Darley road ...	488 72	487 17
201	Urugodawatta road, from Canal to toll bar ...	702 53	698 78
202	Roadway triangle opposite Terminus station ...	1,063 86	1,057 22
203	Bridge street, footpath from Ingham street to Malay street...	402 30	402 24
204	Hyde Park corner, from Union place to Park street	1,709 77	1,700 32
205	Kew road, from Union place to Parsons road ...	2,226 6	—
206	Parsons road, from Kew road to Norris road ...	2,649 81	2,003 9
207	Rifle street, from Malay street to Union place ...	670 50	668 65
208	Union place, from Rifle street to Turret road ...	6,356 34	—
209	Vauxhall street, from Cross road to Hyde Park corner	1,132 40	1,114 64
210	Serpentine road, from Alexandra place to Laurie's road	3,622 63	3,444 51
377	Skinner's road south ...	610 90	526 89
404	Beach road ...	64 81	—
405	Vincent street ...	417 20	405 81
414	North and South Base Line road	5,073 45	—
415	Galle Face Church road ...	1,072 80	—
416	Maliban street ...	1,162 20	—
417	Jail road	2,386 98	—
418	Bridge street ...	759 90	—
426	Malay street ...	1,300 77	—
427	Vauxhall street ...	1,966 80	—
		88,880 89	54,463 76

EXPENDITURE on Estimate No. 66 (Rs. 38,626·20).—Amount upon Sub-Estimates for Gravel Roads.

	Expenditure.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
	Gravel Roads.		
211	Church street, from York street to Queen street ...	523 60	523 17
212	Flagstaff street, from Galle Buck gate to Commissariat street	271 32	268 91
213	Galle Face walk, from Kollupitiya road to Breakwater (Railway)... ...	716 41	—
214	Galle Face Lake road, from Galle Face road to Bridge street	1,770 72	1,758 86
215	Galle Face Church road, from Bridge street to Kollupitiya road	891 7	882 36
216	Queen street, from Church street to Prince street ...	605 47	568 71
217	Cross road, from China street to Butcher street ...	53 31	53 19
218	Maliban street, from Front street to 4th Cross street ...	997 69	994 91
219	Kachcheri road, from Gasworks street to Saunders place	231 90	229 34
220	Maradana road, from St. Sebastian Hill to Lock-gate canal	265 60	264 40
221	Peer Saibo's lane, from Dam street to Old Moor street ...	277 98	275 46
222	Road round Town Hall premises	258 18	256 47
223	Brassfounder street, from Gintupitiya street to Andiwal street	326 6	324 50
224	Gintupitiya street, from Cheku street to Hill street ...	483 61	475 17
225	Alutmawata road, from College street to Ferguson's road	2,741 2	1,508 35
226	Ambalama road near police station, Kotahena ...	361 76	361 76
227	Alwis place	231 33	229 20
228	Berawamulla road, from Wall street to Blomendahl ...	361 76	357 30
229	Bonjean road, from Skinner's road north to St. Lucia's Cathedral... ...	297 2	293 11
230	Cemetery road, from Nagalagam street to Madampitiya road	1,009 12	1,002 3
231	Cemetery road, from College street to Wall street ...	454 29	448 52
232	Cemetery road, from Wall street to police station ...	480 95	478 45
234	Daniel's road, from Madampitiya road to Alutmawata road	538 20	537 97

Expenditure.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
GRAVEL ROADS—*contd.*		
235 Elie lane, from Elie House road to Alutmawata road ...	239 90	239 62
236 Lascoreen street, from Jampettah street to grass field	133 28	131 86
237 Marshall street, from Alutmawata road to cross drain near fish market ...	243 26	242 97
238 Mattakkuliya Farm road, from Vuystwyck road to Totewatta road ...	352 52	351 26
239 Mattakkuliya Centre road, from Ferguson's road to Farm road... ...	778 59	777 72
240 Pansala road, from Cemetery road to the end ...	466 48	456 95
241 Pickering's road, from Korteboam street to Kotahena street	1,118 66	1,118 66
242 Road round Grandpass market and latrine ...	133 20	132 74
243 Santiago street, from Pickering's road to College street	616 89	611 22
244 Shoemakers' lane, from Jampettah street to Galpotta street	426 97	264 96
245 Totewatta road, from Church road to Wattala ferry ...	833 13	831 76
246 Wall's lane, from Alutmawata road to Blomendahl road ...	123 78	123 57
247 Chapel place opposite Grandpass Baptist Chapel, from Grandpass road to Canal ...	280 14	278 54
248 De Waas lane, from Grandpass road to Canal ...	183 91	183 91
249 Molawatta road, from Grandpass road to Canal ...	299 62	299 62
250 Silversmith lane, from Hulftsdorp street to Vincent street	97 44	—
251 Arab lane, from Maradana road to private garden ...	92 56	92 9
252 Avondale road, from Maradana road to Dean's road ...	168 74	164 9
253 Dean's passage, from Dean's road to Saram place ...	384 48	341 29
254 Kynsey place, from Ward place to Norris Canal road	87 38	87 29
255 Kynsey road, from Ward place to Saram place ...	1,021 69	1,021 65
256 Lock-gate lane, from Maradana road to Skinner's road south	256 59	251 36
257 New road, Regent street to Norris Canal road between Norris Canal road and Dean's passage ...	341 76	337 82
258 North and South Base Line road, from Dematagoda road to Kotte road ...	1,820 57	1,820 57
259 Piachaud's lane, from Maradana road to Skinner's road south	472 4	472 4
260 Temple road, from Maradana road to Dematagoda road...	1,486 65	162 73
261 Bridge street, Railway crossing to Galle Face Church road	267 35	267 35
262 De Soysa street, from Malay street to Ingham street ...	163 78	161 25
263 General's Lake road, from Union place to Park street	691 79	691 79
264 Hunupitiya Cross road, from Turret road to Alston place	120 39	117 81
265 Ingham street, from Bridge street to Convict Establishment	320 66	—
266 Java lane, from Ingham street to Malay street ...	94 38	91 99
267 Jefferson's street, from Union place to General's Lake road	245 67	242 19
268 Kew passage, from Churchyard lane to Kew road near small mosque ...	21 98	21 67
269 Mews, from Malay street to Churchyard lane ...	131 88	131 8
271 Staples street, from Union place to Braybrooke street	362 4	355 90
272 Austin place, from Kynsey road to Kanatta road ...	163 84	161 97
273 Boyd place, from Polwatta road to Alston place ...	243 84	241 47
274 Buller's road, from Kanatta road to Kotte road ...	794 40	781 37
275 Cameron's place, from Green path to St. Michael's road...	167 64	165 4
276 East and West Base Line road, from Kynsey road to Welikada toll	1,157 27	1,155 64
277 Folly road, from Layard's road to reservation ...	95 32	93 34
278 Green path, from Turret road to Alexandra place ...	1,870 71	1,842 79
279 Horton place, from MacCarthy place to Kynsey road ...	794 40	767 20
280 Polwatta road from Green path to the lake ...	245 5	245 5
281 Ward place, from Union place to Kanatta road ...	2,265 56	2,157 34
402 Approach road to Maradana Junction	102 38	101 13
456 Dam street	359 86	—
457 Alston place ...	1,161 11	—
458 Borella Cross road ...	117 77	—
	38,567 67	32,681 80

EXPENDITURE on Estimate No. 67 (Rs. 1,754·22).—Amount upon Sub-Estimates for Lanes.

Expenditure.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
LANES.		
282 Cafferman's lane, from 1st Fishers' lane to Norris road	118 4	113 31
283 Fishers' lane 1st, from Front street to Caffer lane ...	57 12	56 75
284 Fishers' lane 2nd, from Front street to Caffer lane ...	57 12	56 75
285 Mitcho's lane, from Front street to Cafferman's lane...	60 92	59 26
286 Akbar's lane, from St. Sebastian street to Marties' lane	111 38	108 2
287 Dhobies' lane, from Cramer's lane to Marties' lane ...	137 8	137 8
288 Gomes' lane, from Marties' lane to St. Sebastian Hill ...	103 76	102 12
289 Marties' lane, from St. Sebastian street to Akbar's lane...	122 23	118 85
290 Muhandiram's lane, from Cramer's lane to Marties' lane	182 78	177 95
291 Mosque lane, from Old Moor street to New Moor street...	30 17	—
292 Siripina lane, from Kuruwe street to Mosque lane ...	157 8	157 1
293 Henamulla lane, from Daniel's road to the end ...	120 19	—
294 Paranawadiya lane, from Maradana road to Paranawadiya	98 25	98 25
295 Ahamat lane, from Church street, Slave Island, to private houses ...	37 92	37 37
296 Chapel lane, from Slave Island Church road to Railway line	68 96	68 46
297 Churchyard lane, from Rifle street to The Mews ...	224 98	215 61
298 Mosque lane, from Kollupitiya road to the Mosque ...	66 24	63 49
	1,754 22	1,570 28

EXPENDITURE on Estimate No. 68 (Rs. 633·51).—Amount upon Sub-Estimates for Footways.

Expenditure. Footways.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.	Expenditure.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
299 Jubilee Fountain footway ...	59 97	—	304 Alutmawata road footway ...	95 20	78 50
300 Prince street footway ...	104 72	—	305 Korteboam street footway ...	123 72	123 51
301 Dam street footway ...	28 56	—			
302 Hulftsdorp street footway ...	78 54	—		633 51	343 22
303 Kochchikada footway ...	142 80	141 21			

EXPENDITURE on Estimate No. 38 (Rs. 3,000).—Amount upon Sub-Estimates for Repair of Markets.

Expenditure. Markets.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
378 Repair of Mohammedan meat market ...	38 0	26 13
387 Repair of Kollupitiya market ...	103 0	98 85
388 Repair of Slave Island market ...	36 0	34 5
437 Repair of Dean's road market ...	568 0	41 38
448 Repair of Gintupitiya street market ...	382 0	82 83
449 Repair of Cramer's lane market ...	335 0	133 74
450 Repair of Grandpass market ...	102 0	—
	1,582 0	416 98

EXPENDITURE on Estimate No. 59 (Rs. 600).—Amount upon Sub-Estimates for Repair of Toll Houses.

Expenditure. Toll Houses.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.	Expenditure.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
380 Repairs, Lock-gate toll house	35 61	—	384 Repairs, Wellawatta toll house	57 0	—
381 Repairs, Drawbridge toll house	46 0	36 67	385 Repairs, Bambalapitiya toll house	109 0	—
382 Repairs, Dematagoda toll house	56 85	0 55	386 Repairs, Welikada toll house	58 0	47 5
383 Repairs, Urugodawatta toll house	35 0	—		397 46	84 27

EXPENDITURE on Estimate No. 155 (Rs. 10,500).—Amount upon Sub-Estimates for Sanitation and Drainage.

Expenditure. Sanitation and Drainage.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
379 Drain, De Waas's lane	800 0	8 38
430 Drainage, York street	1,012 0	—
465 Underground drain, Parsons road ...	262 0	51 90
	2,074 0	60 28

EXPENDITURE on Estimate No. 97 (Rs. 500).—Amount upon Sub-Estimates for Repair of Fire Stations.

Expenditure. Fire Stations.	Estimated Expenditure for 1902. Rs. c.	Disbursements to Dec. 31, 1902. Rs. c.
472 Rethatching fire engine cooly lines, Kollupitiya station ...	71 50	—
473 Do. Racquet court ...	79 0	—
	150 50	—

EXPENDITURE on Estimate No. 60 (Rs. 1,000).—Amount upon Sub-Estimates for Repairs to Buildings.

Expenditure.	Estimated Expenditure for 1902.	Disbursements to Dec. 31, 1902.
Buildings.	Rs. c.	Rs c.
454 Repairs, Municipal workshop	408 0 ...	3 30
471 Railings, tats, &c., to verandah, Health Department ...	72 0 ...	—
474 Repairs to cemetery-keeper's quarters, Madampitiya ...	278 0 ...	—
475 Whitewashing cemetery-keeper's office, Kanatta ...	34 0 ...	—
	792 0	3 30

APPENDIX B. (Quoted in Paragraph 70.)

THERE were no cases of cholera during this year. There were 100 cases of smallpox sent to Infectious Diseases Hospital. Of these, 27 proved fatal. One case proved fatal in town, and was reported after death from Kotahena South Ward. Of the 100 cases, 1 occurred in Fort Ward, 12 in the Pettah, 19 in St. Paul's, 10 in New Bazaar, 2 in Kotahena North, 32 in Kotahena South, 5 in Maradana North, 2 in Maradana South, 4 in Slave Island, and 13 in Colpetty Ward.

WM. MARSHALL PHILIP,
Medical Officer of Health.

APPENDIX C. (Quoted in Paragraph 85.)

Statement of Receipts and Expenditure of the Health Department during 1902.

Receipts.	Rs. c.	Rs. c.
By recoveries from householders for conservancy of latrines ...	150,302 67	
By recoveries from householders for buckets and covers sold ...	625 0	
By recoveries from householders for disinfectants sold ...	987 89	
By recoveries, Miscellaneous ...	151 0	
		152,066 56
Total ...		152,066 56

Expenditure.	Rs. c.	Rs. c.
To Vote No. 99, Salaries, Wages, and Allowances :—		
Salaries of office staff, supervisors, and allowances ...	9,173 36	
Amount paid to contractor for conservancy ...	63,865 37	
		73,038 73
To Vote No. 100, Purchase of Disinfectants :—		
Cost of disinfectants ...	808 50	
Cost of distributing of coir dust	4,200 0	
		5,008 50
To Vote No. 101, Purchase of Tools	—	25 0
To Vote No. 102, Purchase of Stationery, &c. ...	—	360 51
To Vote No. 104, Refunds ...	—	101 48
To Vote No. 105, Hire of Bulls ...	—	45,591 45
To Vote No. 106, Repair of Carts...	—	5,812 10
To Vote No. 107, Miscellaneous :—		
Rent of lands ...	100 0	
Supervisors' uniform ...	229 0	
Furniture	15 0	
Tarpaulins	122 50	
Miscellaneous ...	788 42	
		1,254 92
To Vote No. 108, Maintenance of Roads at Depôt ...	—	769 9
To Vote No. 346, Upkeep of Road to Night Soil Depôt, Narahenpitiya	—	192 42
To Vote No. 390, Repairs to Floor of Cattle Sheds, Night Soil Depôt	—	41 57
To Vote No. 422, Metalling Narahenpitiya road ...	—	2,385 5
To Vote No. 452, Repair of Road and Construction of a new portion at Night Soil Depôt, Narahenpitiya	—	207 78
To Vote No. 468, Septic Tanks at Night Soil Depôt ...	—	381 80
Total ...	—	135,170 40

APPENDIX D. (Quoted in Paragraph 89.)

MUNICIPAL COURT OF COLOMBO.

A classified Statement of Charges instituted and disposed of in the Court of the Municipal Magistrate during the Year 1902.

	Vagrants.		Thoroughfares.		Cruelty to Animals.		Nuisances.		Carriers.		Police.		Carriages let to Hire.		Opium.		Unlawful Gaming.		Miscellaneous.		Total.	
	No. 4 of 1841.		No. 10 of 1861.		No. 7 of 1862.		No. 15 of 1862.		No. 14 of 1865.		No. 16 of 1865.		No. 9 of 1901.		No. 4 of 1878.		No. 17 of 1889.					
	C.	P.	C.	P.	C.	P.	C.	P.	C.	P.	C.	P.	C.	P.	C.	P.	C.	P.	C.	P.	C.	P.
Pending on December 31, 1902 ...	9	16	3	3	1	1	33	33	—	—	23	24	3	3	—	—	2	4	212	286	286	370
Instituted during the year	794	1,289	149	149	1,118	1,118	1,689	1,988	34	34	4,528	4,563	61	61	1	1	104	382	7,882	8,120	16360	17,705
	803	1,305	152	152	1,119	1,119	1,722	2,021	34	34	4,551	4,587	64	64	1	1	106	386	8,094	8,406	16646	18,075
Convicted	673	1,112	127	127	1,095	1,095	1,366	1,579	27	27	4,064	4,087	35	35	1	1	90	304	3,097	3,183	10575	11,550
Acquitted and discharged	129	191	25	25	24	24	312	393	7	7	486	499	29	29	—	—	12	52	4,831	5,057	5,855	6,277
Pending	1	2	—	—	—	—	44	49	—	—	1	1	—	—	—	—	4	30	166	166	216	248

Pending from 1901	286	Disposed of	16,430
Instituted in 1902	16,360	Pending on January 1, 1903 ...	216
Total ...	16,646	Total ...	16,646

* The cases appearing under this head are instituted under Ordinances Nos. 8 of 1866, 16 of 1881, 2 of 1883 (section 259), 7 of 1887, 7 of 1889, 26 of 1890, and 1 of 1896.

APPENDIX E. (Quoted in Paragraph 121.)

TABLES OF ATTENDANCE.

"p" signifies "present"; "a" signifies "absent."

I.—Meetings of the Municipal Council.

Names of Members.	General Meeting, 10-1-02.	General Meeting, 14-2-02.	General Meeting, 14-3-02.	General Meeting, 11-4-02.	General Meeting, 9-5-02.	Special Meeting, 14-5-02.	General Meeting, 13-6-02.	General Meeting, 11-7-02.	Adjourned Meeting, 15-7-02.	General Meeting, 8-8-02.	General Meeting, 12-9-02.	General Meeting, 10-10-02	Special Meeting, 23-10-02.	General Meeting, 14-11-02.	Special Meeting, 25-11-02.	Special Meeting, 9-12-03.	General Meeting, 12-12-02.
A. S. Pagden, Esq., Chairman ...	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
Dr. A. Perry ...	a	p	p	p	...	...	...	...	...	...	...	...	...	...	...	...	...
Dr. C. T. Griffin ...	...	...	...	...	p	a	p	p	a	p	p	a	a	p	p	p	p
Dr. J. L. Vanderstraaten ...	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	a
A. de A. Seneviratne, Esq. ...	p	p	p	p	...	...	...	...	...	...	...	...	...	...	...	...	...
Pestonjee Dinshaw Khan, Esq. ...	...	...	...	...	p	p	p	p	p	p	p	p	p	p	p	p	p
Hon. Mr. F. A. Cooper, C.M.G. ...	a	p	p	p	a	a	p	p	p	p.	a	p	p	a	p	a	p
Major L. F. Knollys, C.M.G. ...	a	p	p	p	a	a	...	...	...	...	...	...	...	...	...	...	...
J. Rudd, Esq. ...	...	...	...	...	...	...	a	a	p	p	...	...	...	...	...	...	...
Major A. W. de Wilton ...	...	...	...	...	...	...	...	...	...	...	p	p	a	p	a	a	p
P. D. Warren, Esq. ...	p	a	p	p	p	a	a	a	a	p	...	...	...	...	...	...	...
F. H. Grinlinton, Esq. ...	...	...	...	...	...	...	...	...	...	...	a	p	p	a	a	a	a
D. W. H. Skrine, Esq....	a	p	a	p	a	a	p	p	a	p	p	...	...	...	...	...	...
Walter Shakspeare, Esq. ...	...	...	...	...	...	...	...	...	...	...	...	p	p	p	p	p	p
Hon. Mr. Giles F. Walker ...	p	p	p	p	a	a	p	p	a	p	a	...	...	...	...	...	...
R. Davidson, Esq. ...	...	...	...	...	...	...	...	...	...	...	...	p	p	p	p	p	p
Chas. Perera, Esq. ...	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
P. Coomaraswamy, Esq. ...	p	p	a	p	p	p	p	a	a	p	a	a	a	p	a	a	a
Chas. P. Dias, Esq. ...	p	p	p	p	p	a	p	p	p	p	p	p	p	p	p	a	p
R. H. Morgan, Esq. ...	p	p	p	p	p	a	p	p	p	p	p	p	a	a	a	a	a
Arthur Alvis, Esq. ...	p	p	p	p	p	p	p	p	p	p	p	p	a	p	p	a	a
James Peiris, Esq. ...	p	p	p	p	p	a	p	p	p	p	p	p	p	p	p	p	p
H. A. Jayewardene, Esq. ...	p	p	p	p	p	a	p	a	p	p	p	p	p	p	a	a	p
Dr. Solomon Fernando ...	a	p	a	p	p	a	p	p	p	p	p	p	p	p	p	a	p
M. L. M. Zainudeen, Esq. ...	p	p	p	p	p	a	p	p	p	p	p	a	p	a	a	p	a

Number of Meetings, 17.

A. S. Pagden Esq., Chairman	... Attended	17	Meetings
Dr. A. Perry ...	... ,,	3	,,
Dr. C. T. Griffin ...	... ,,	9	,,
Dr. J. L. Vanderstraaten	... ,,	16	,,
A. de A. Seneviratne, Esq.	... ,,	4	,,
Pestonjee Dinshaw Khan, Esq.	... ,,	13	,,
Hon. Mr. F. A. Cooper, C.M.G.	... ,,	11	,,
Major L. F. Knollys, C.M.G.	... ,,	3	,,
J. Rudd, Esq. ...	... ,,	2	,,
Major A. W. de Wilton	... ,,	4	,,
P. D. Warren, Esq. ...	... ,,	5	,,
F. H. Grinlinton, Esq.	... ,,	3	,,
D. W. H. Skrine, Esq.	... Attended	6	Meetings
Walter Shakspeare, Esq.	... ,,	6	,,
Hon. Mr. Giles F. Walker	... ,,	7	,,
R. Davidson, Esq. ...	... ,,	5	,,
Chas. Perera, Esq. ...	... ,,	17	,,
P. Coomaraswamy, Esq.	... ,,	8	,,
Chas. P. Dias, Esq. ...	... ,,	15	,,
R. H. Morgan, Esq. ...	... ,,	11	,,
Arthur Alvis, Esq. ...	... ,,	15	,,
James Peiris, Esq. ...	... ,,	16	,,
H. A. Jayewardene, Esq.	... ,,	13	,,
Dr. Solomon Fernando	... ,,	12	,,
M. L. M. Zainudeen, Esq.	... ,,	12	,,

II.—Meetings of the Standing Committees.

Names of Members.	Jan. 17, 1902.	Feb. 7, 1902.	Feb. 21, 1902.	Feb. 24, 1902.	Mar. 7, 1902.	Mar. 14, 1902	Mar. 24, 1902.	April 23, 1902.	May 2, 1902.	May 16, 1902.	June 6, 1902.	June 20, 1902.	June 24, 1902.	July 4, 1902.	July 18, 1902.	Aug. 1, 1902.	Aug. 15, 1902.	Sept. 5, 1902.	Sept. 19, 1902.	Oct. 3, 1902.	Oct. 17, 1902.	Nov. 7, 1902.	Nov. 21, 1902.	Dec. 5, 1902.	Dec. 16, 1902.
A. S. Pagden, Esq., Chairman...	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
Dr. J. L. Vanderstraaten ...	p	p	p	p	p	p	p	a	p	p	p	p	a	p	p	p	p	a	p	p	p	a	p	a	p
Chas. Perera, Esq. ...	p	p	p	p	p	p	p	a	p	p	p	a	a	p	p	p	p	p	p	p	p	p	p	a	p
Chas. P. Dias, Esq. ...	p	p	a	p	p	p	p	a	p	p	p	a	a	a	p	p	p	p	p	p	p	p	p	a	p
Arthur Alvis, Esq. ...	p	p	p	p	p	p	p	p	p	a	p	a	a	p	p	p	a	a	p	p	a	p	a	a	a
H. A. Jayewardene, Esq. ...	p	a	a	a	a	a	p	p	a	a	a	a	a	p	p	p	a	a	a	a	a	p	a	a	a

Number of Meetings, 25.

A. S. Pagden, Esq., Chairman	... Attended 25 Meetings	Chas. P. Dias, Esq.	... Attended 18 Meetings
Dr. J. L. Vanderstraaten	... „ 19 „	Arthur Alvis, Esq.	... „ 20 „
Chas. Perera, Esq.	... „ 22 „	H. A. Jayewardene, Esq.	... „ 8 „

III.—Meetings of the Special Committees.

(1) Special Committee to inquire into *inter alia* the method of keeping Accounts in the Works Department.

Re-appointed January 10, 1902.

	Jan. 16, 1902.	Feb. 5, 1902.	May 19, 1902.	Aug. 7, 1902.	Oct. 24, 1902.
A. S. Pagden, Esq., Chairman ...	p	p	p	p	p
Hon. Mr. F. A. Cooper, C.M.G.	a	p	a	p	a
Major L. F. Knollys, C.M.G. ...	a	p	...	...	...
D. W. H. Skrine, Esq. ...	a	p	a	p	...
P. D. Khan, Esq. ...	...	...	...	...	p
W. Shakspeare, Esq. ...	...	...	...	...	a
Chas. Perera, Esq. ...	p	p	p	p	p
P. Coomaraswamy, Esq. ...	a	a	p	a	a
R. H. Morgan, Esq. ...	a	p	p	a	a
Arthur Alvis, Esq. ...	a	a	a	a	a
H. A. Jayewardene, Esq. ...	a	p	a	a	a
James Peiris, Esq. ...	a	a	a	a	p

Number of Meetings, 5.

A. S. Pagden, Esq., Chairman	Attended	5	Meetings
Hon. Mr. F. A. Cooper, C.M.G.	,,	2	,,
Major L. F. Knollys, C.M.G.	,,	1	,,
D. W. H. Skrine, Esq.	,,	2	,,
P. D. Khan, Esq.	,,	1	,,
W. Shakspeare, Esq.	,,	0	,,
Chas. Perera, Esq.	Attended	5	Meetings
P. Coomaraswamy, Esq.	,,	1	,,
R. H. Morgan, Esq.	,,	2	,,
Arthur Alvis, Esq.	,,	0	,,
James Peiris, Esq.	,,	1	,,
H. A. Jayewardene, Esq.	,,	1	,,

(2) Special Committee to Report (1) Whether it is necessary to provide a new Municipal Office in view of the increase of Business and Establishment; (2) if it is necessary, to suggest one or more Suitable Sites; and (3) as to Probable Cost.

Re-appointed January 10, 1902.

	Jan. 24, 1902.	Jan. 29, 1902.	Feb. 6, 1902.	Feb. 14 1902.
A. S. Pagden, Esq., Chairman ...	p	p	p	p
A. de A. Seneviratne, Esq. ...	a	a	a	a
Hon. Mr. F. A. Cooper, C.M.G. ...	a	a	a	p
P. Coomaraswamy, Esq. ...	a	a	a	p
Arthur Alvis, Esq. ...	a	a	a	p

Number of Meetings, 4.

A. S. Pagden, Esq., Chairman	Attended	4	Meetings
A. de A. Seneviratne, Esq.	,,	0	,,
Hon. Mr. F. A. Cooper, C.M.G.	,,	1	,,
P. Coomaraswamy, Esq.	Attended	1	Meeting
Arthur Alvis, Esq.	,,	1	,,

(3) Special Committee to consider *inter alia* Rules in connection with Tramways.

Re-appointed January 10, 1902.

	July 9, 1902.		July 9, 1902.
A. S. Pagden, Esq., Chairman ...	p	Chas. Perera, Esq.	p
Dr. J. L. Vanderstraaten ...	p	P. Coomaraswamy, Esq. ...	a
A. de A. Seneviratne, Esq. ...	a	R. H. Morgan, Esq.	a

Number of Meetings, 1.

A. S. Pagden, Esq., Chairman	Attended	1	Meeting
Dr. J. L. Vanderstraaten	,,	1	,,
A. de A. Seneviratne, Esq.	,,	0	,,
Chas. Perera, Esq.	Attended	1	Meeting
P. Coomaraswamy, Esq.	,,	0	,,
R. H. Morgan, Esq.	,,	0	,,

(4) Special Committee to define Duties of the Head Overseer, Works Department.

Re-appointed January 10, 1902.

	Jan. 23, 1902.		Jan. 23, 1902.
A. S. Pagden, Esq., Chairman ...	p	P. D. Warren, Esq.	a
Dr. J. L. Vanderstraaten, Esq. ...	p	Chas. Perera, Esq.	p
Hon. Mr. F. A. Cooper, C.M.G. ...	a	H. A. Jayewardene, Esq. ...	a

Number of Meetings, 1.

A. S. Pagden, Esq., Chairman	Attended	1	Meeting
Dr. J. L. Vanderstraaten	,,	1	,,
Hon. Mr. F. A. Cooper, C.M.G.	,,	0	,,
P. D. Warren, Esq.	Attended	0	Meeting
Chas. Perera, Esq.	,,	1	,,
H. A. Jayewardene, Esq.	,,	0	,,

(5) Special Committee to go into the question of Providing Shelter at or near the Borella Cemetery.

Re-appointed January 10, 1902.

A. S. Pagden Esq., Chairman	Major L. F. Knollys, C.M.G.
Dr. A. Perry	Chas. Perera, Esq.
Dr. J. L. Vanderstraaten	P. Coomaraswamy, Esq.
Hon. Mr. F. A. Cooper, C.M.G.	Arthur Alvis, Esq.

(6) Special Committee to inquire and report on the matter of Widening Wellawatta Lane.

Re-appointed January 10, 1902.

A. S. Pagden, Esq., Chairman.	R. H. Morgan, Esq.
Dr. J. L. Vanderstraaten.	Arthur Alvis, Esq.
Chas. Perera, Esq.	

(7) Special Committee to consider Letter No. 64/13713 of July 30, 1901, from the Colonial Secretary, with reference to Drainage and Water Supply of Colombo.

Re-appointed January 10, 1902.

	March 5, 1902.		March 5, 1902.
A. S. Pagden, Esq., Chairman ...	p	D. W. H. Skrine, Esq.	a
Dr. A. Perry ...	p	Chas. Perera, Esq. ...	p
Dr. J. L. Vanderstraaten ...	p	P. Coomaraswamy, Esq. ...	a
A. de A. Seneviratne, Esq. ...	a	R. H. Morgan, Esq. ...	a
Hon. Mr. F. A. Cooper, C.M.G. ...	a	Arthur Alvis, Esq. ...	a

Number of Meetings, 1.

A. S. Pagden, Esq., Chairman	... Attended	1	Meeting
Dr. A. Perry ...	... "	1	"
Dr. J. L. Vanderstraaten	... "	1	"
A. de A. Seneviratne, Esq.	... "	0	"
Hon. Mr. F. A. Cooper, C.M.G.	... "	0	"
D. W. H. Skrine, Esq.	... Attended	0	Meeting
Chas. Perera, Esq.	... "	1	"
P. Coomaraswamy, Esq.	... "	0	"
R. H. Morgan, Esq.	... "	0	"
Arthur Alvis, Esq.	... "	0	"

(8) Special Committee to Draft an Address to His Majesty the King on the occasion of his Coronation, and to make necessary Arrangements and Recommendations generally for celebrating the Event.

Appointed February 14, 1902.

	February 26, 1902.	April 15, 1902.	May 30, 1902.
A. S. Pagden, Esq., Chairman ...	p	p	—
Dr. A. Perry ...	p	—	—
A. de A. Seneviratne, Esq.	p	—	—
Chas. Perera, Esq. ...	p	p	p
P. Coomaraswamy, Esq.	a	a	a
R. H. Morgan, Esq. ...	a	a	a
Arthur Alvis, Esq. ...	p	p	a
Dr. Solomon Fernando	a	a	a
Chas. P. Dias, Esq. ...	—	—	p
James Peiris, Esq. ...	—	—	p
H. A. Jayewardene, Esq.	—	—	p
M. L. M. Zainudeen, Esq.	—	p	a

Number of Meetings, 3.

A. S. Pagden, Esq., Chairman	...Attended	2	Meetings
Dr. A. Perry ...	... "	1	"
A. de A. Seneviratne, Esq.	... "	1	"
Chas. Perera, Esq....	... "	3	"
P. Coomaraswamy, Esq.	... "	0	"
R. H. Morgan, Esq.	... "	0	"
Arthur Alvis, Esq.	... Attended	2	Meetings
Dr. Solomon Fernando	... "	0	"
Chas. P. Dias, Esq.	... "	1	"
James Peiris, Esq.	... "	1	"
H. A. Jayawardena, Esq.	... "	1	"
M. L. M. Zainudeen, Esq.	... "	1	"

(9) Special Committee to consider Letter from Colonial Secretary, forwarding a copy of Ordinance to provide for the Registration of Dogs, and inviting attention to section 4 thereof and draft by-laws (and proposed new building By-laws.)

Appointed February 14, 1902.

	March 6, 1902.	March 10, 1902.	March 12, 1902.	May 23, 1902.	June 12, 1902.	June 18, 1902.	July 2, 1902.	July 8, 1902.	July 25, 1902.	Sept. 24, 1902.	Oct. 27, 1902.	Nov. 3, 1902.	Nov. 19, 1902.	Nov. 28, 1902.	Dec. 11, 1902.
A. S. Pagden, Esq., Chairman ...	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
Hon. Mr. F. A. Cooper, C.M.G. ...	a	a	a	a	a	p	a	p	a	a	a	a	a	a	a
Dr. J. L. Vanderstraaten ...	p	p	p	p	p	a	a	p	p	p	p	a	a	p	p
P. D. Khan, Esq. ...	...	...	...	...	...	...	...	...	...	...	p	p	a	p	p
Hon. Mr. Giles F. Walker ...	a	a	a	a	a	a	a	a	a	a	...	...	...	...	...
W. Shakspeare, Esq. ...	...	...	...	...	...	...	...	...	...	...	a	a	a	p	a
Chas. Perera, Esq. ...	p	a	p	p	a	a	a	a	a	p	p	p	a	a	a
P. Coomaraswamy, Esq. ...	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Arthur Alvis, Esq. ...	p	a	a	p	a	a	a	a	a	p	p	a	a	a	a
H. A. Jayewardene, Esq. ...	a	a	a	a	a	a	a	a	a	a	a	p	a	a	a

Number of Meetings, 15.

A. S. Pagden, Esq., Chairman	... Attended	15	Meetings
Hon. Mr. F. A. Cooper, C.M.G.	... "	2	"
Dr. J. L. Vanderstraaten	... "	11	"
Hon. Mr. Giles F. Walker	... "	0	"
P. D. Khan, Esq.	... "	4	"
W. Shakspeare, Esq.	... Attended	1	Meeting
Chas. Perera, Esq.	... "	6	"
P. Coomaraswamy, Esq.	... "	0	"
Arthur Alvis, Esq.	... "	4	"
H. A. Jayewardene, Esq.	... "	1	"

(10) Special Committee to consider Mr. Councillor C. Perera's Motion regarding the exemption of Untenanted Buildings from Assessment Rate during the period of such non-tenancy.

Appointed April 17, 1902.

	May 22, 1902.	July 24, 1902.	Aug. 5, 1902.	Aug. 21, 1902.	Sept. 2, 1902.	Sept. 10, 1902.	Sept. 15, 1902.	Sept. 22, 1902.	Oct. 16, 1902.
A. S. Pagden, Esq., Chairman ...	p	p	p	p	p	p	p	p	p
Hon. Mr. Giles F. Walker ...	a	a	a	a	a	...	...	...	...
P. D. Khan, Esq. ...	...	...	...	...	...	...	...	...	p
W. Shakspeare, Esq. ...	...	...	...	...	...	...	...	...	a
Chas. Perera, Esq. ...	p	p	p	p	p	p	p	p	p
P. Coomaraswamy, Esq. ...	a	a	a	a	a	a	a	a	a
Dr. Solomon Fernando ...	p	a	a	a	p	p	p	a	a

Number of Meetings, 9.

A. S. Pagden, Esq., Chairman	... Attended	9	Meetings
Hon. Mr. Giles F. Walker	... "	0	"
P. D. Khan, Esq.	... "	1	"
W. Shakspeare, Esq.	... "	0	"
Chas. Perera, Esq.	... Attended	9	Meetings
P. Coomaraswamy, Esq.	... "	0	"
Dr. Solomn Fern[illegible]	... "	4	"

(11) Special Committee to consider Amendments proposed to be made by a Member of the Legislative Council in respect of the new Municipal By-laws.
Appointed May 9, 1902.

Names of Members.	May 20, 1902.	June 23, 1902.	July 3, 1902.	July 10, 1902.	July 16, 1902.	July 30, 1902.	Aug. 13, 1902.	Aug. 19, 1902.	Aug. 27, 1902.	Sept. 11, 1902.	Sept. 17, 1902.	Sept. 23, 1902.	Sept. 30, 1902.	Oct. 7 1902.	Oct. 14, 1902.	Oct. 21, 1902.	Oct. 28, 1902.	Nov. 4, 1902.	Nov. 13, 1902.	Nov. 18, 1902.	Nov. 26, 1902.	Nov. 27, 1902.	Nov. 28, 1902.	Dec. 10, 1902.	Dec. 11, 1902.
A. S. Pagden, Esq., Chairman	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
Hon. Mr. F. A. Cooper, C.M.G. ...	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
Hon. Mr. Giles F. Walker ...	a	a	a	a	a	a	a	a	a	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
P. D. Khan, Esq. ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	p	p	p	p	p	p	a	a	p	a	p
W. Shakspeare, Esq. ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	a	p	p	p	a	p	a	a	a	a	a
Chas. Perera, Esq. ...	p	a	a	a	p	p	a	p	p	p	p	p	p	p	a	p	p	a	a	a	a	a	a	a	a
R. H. Morgan, Esq. ...	a	a	a	a	a	a	a	a	a	a	a	a	a	p	a	a	a	a	a	a	a	a	a	a	a
James Peiris, Esq. ...	p	a	p	a	p	a	a	a	p	p	p	a	p	p	a	p	a	p	a	p	a	p	a	a	a
H. A. Jayewardene, Esq. ...	a	a	a	a	a	a	a	a	p	p	a	p	a	a	a	p	p	a	a	a	a	a	a	a	a

Number of Meetings, 25.

A. S. Pagden, Esq., Chairman	... Attended	25	Meetings	Chas. Perera, Esq.	... Attended	12 Meetings
Hon. Mr. F. A. Cooper, C.M.G.	... „	0	„	R. H. Morgan, Esq.	... „	1 „
Hon. Mr. Giles F. Walker	... „	0	„	James Peiris, Esq.	... „	12 „
P. D. Khan, Esq.	... „	8	„	H. A. Jayewardene, Esq.	... „	5 „
W. Shakspeare, Esq.	... „	4	„			

(12) Special Committee to consider the Chairman's Administration Report for 1901.

Appointed June 13, 1902.

	August 22, 1902.			August 22, 1902.
Dr. J. L. Vanderstraaten	...	p	Chas. Perera, Esq. ...	... p
Hon. Mr. F. A. Cooper, C.M.G.	...	a	R. H. Morgan, Esq. ...	... p
P. D. Khan, Esq. ...	...	—	Arthur Alvis, Esq. ...	... p
D. W. H. Skrine, Esq....	...	p	James Peiris, Esq. ...	... p
Hon. Mr. Giles F. Walker	...	a	H. A. Jayewardene, Esq.	... p
W. Shakspeare, Esq. ..:	...	—		

Number of Meetings, 1.

Dr. J. L. Vanderstraaten	...	Attended	1	Meeting	Chas. Perera, Esq....	... Attended 1 Meeting
Hon. Mr. F. A. Cooper, C.M.G.	...	,,	0	,,	R. H. Morgan, Esq.	... ,, 1 ,,
D. W. H. Skrine, Esq.	...	,,	1	,,	Arthur Alvis, Esq.	... ,, 1 ,,
P. D. Khan, Esq. ...	...	,,	—	,,	James Peiris, Esq.	... ,, 1 ,,
Hon. Mr. Giles F. Walker	...	,,	0	,,	H. A. Jayewardene, Esq.	... ,, 1 ,,
W. Shakspeare, Esq.	...	,,	—	,,		

(13) Special Committee to report on the question of Night Train Service for the transport of Sewage and recommend a proper system of Disposal of Night Soil.

Appointed August 8, 1902.

	October 6, 1902.			October 6, 1902.
A. S. Pagden, Esq., Chairman	...	p	P. D. Khan, Esq. ...	... p
Dr. C. T. Griffin ...	...	a	Chas. Perera, Esq. ...	... p
Hon. Mr. F. A. Cooper, C.M.G.	...	p	Dr. Solomon Fernando	... p

Number of Meetings, 1.

A. S. Pagden, Esq., Chairman	...	Attended	1	Meeting	P. D. Khan, Esq. ...	... Attended 1 Meeting
Dr. C. T. Griffin ...	...	,,	0	,,	Chas. Perera, Esq....	... ,, 1 ,,
Hon. Mr. F. A. Cooper, C.M.G.	...	,,	1	,,	Dr. Solomon Fernando	... ,, 1 ,,

(14) Special Committee to consider the question of the Proposed Acquisition of Mr. Drieberg's Property (Quarry House) for the purpose of a Quarry.

Appointed September 12, 1902.

	September 18, 1902.			September 18, 1902.
A. S. Pagden, Esq., Chairman	...	p	James Peiris, Esq. ...	... p
Hon. Mr. F. A. Cooper, C.M.G.	...	a	Dr. Solomon Fernando	... p
R. H. Morgan, Esq. ...	...	p		

Number of Meetings, 1.

A. S. Pagden, Esq., Chairman	...	Attended	1	Meeting	James Peiris, Esq.	... Attended 1 Meeting
Hon. Mr. F. A. Cooper, C.M.G.	...	,,	0	,,	Dr. Solomon Fernando	... ,, 1 ,,
R. H. Morgan, Esq.	...	,,	1	,,		

(15) Special Committee to consider Messrs. Delmege, Forsyth & Company's Application to lay a Pipe Line from Kochchikada to Maradana.

Appointed October 10, 1902.

	Oct. 22, 1902.	Oct. 29, 1902.		Oct. 22, 1902.	Oct. 29, 1902.
A. S. Pagden, Esq., Chairman ...	p	... p	P. D. Khan, Esq.	... a	... a
Hon. Mr. F. A. Cooper, C.M.G. ...	a	... p	R. H. Morgan, Esq.	... a	... a
F. H. Grinlinton, Esq. ...	a	... p	H. A. Jayewardene, Esq.	... p	... p

Number of Meetings, 2.

A. S. Pagden, Esq. Chairman	...	Attended	2	Meetings	P, D. Khan, Esq. ...	... Attended 0 Meeting
Hon. Mr. F. A. Cooper, C.M.G.	...	,,	1	,,	R. H. Morgan, Esq.	... ,, 0 ,,
F. H. Grinlinton, Esq.	...	,,	1	,,	H. A. Jayewardene, Esq.	... ,, 2 ,,

(16) Special Committee in connection with the Address to be presented to His Excellency the Governor on his return to the Colony, and the necessary funds for the Address and for a contribution towards a suitable Reception to be provided by the Council.

Appointed October 10, 1902.

	October 15, 1902.		October 15, 1902.
A. S. Pagden, Esq. Chairman	...	p	Arthur Alvis, Esq. ...	... p
Hon. Mr. F. A. Cooper, C.M.G.	...	p	James Peiris, Esq. ...	... p
Chas. Perera, Esq. ...	...	p	H. A. Jayewardene, Esq.	... a

Number of Meetings, 1.

A. S. Pagden, Esq. Chairman,	...	Attended	1	Meeting	Arthur Alvis, Esq.	... Attended 1 Meeting
Hon. Mr. F. A. Cooper, C.M.G.	...	,,	1	,,	James Peiris, Esq.	... ,, 1 ,,
Chas. Perera, Esq.	...	,,	1	,,	H. A. Jayewardene, Esq.	... ,, 0 ,,

REPORT OF THE SPECIAL COMMITTEE.

Report of the Special Committee appointed on the 3rd April, 1903, to consider the Chairman's Report for 1902.

THE Special Committee note with satisfaction the general increase in revenue. They also view with satisfaction the increase in recoveries of arrears, and emphasize the importance of continuing vigorous action in recovering same.

2. It is observed that the Ordinance No. 7 of 1902, besides permitting the laying of electric mains, also gives power to grant other concessions, which fact, however, remains unrecorded in the report. In considering future concessions that may be made under Ordinance No. 7 of 1902 the Committee would strongly urge the desirability of following, as far as practicable, the provisions and regulations laid down by the English Acts in connection with similar matters.

3. It will be of interest to learn what are the financial results of the Council being empowered to levy taxes on such class of vehicles as have hitherto escaped taxation.

4. The Committee also observe that no comment appears in the report as to street watering, although an expenditure of Rs. 2,242·56 seems to have been incurred in the construction of seven watering carts. It will be interesting to know whether this indicates any extension of the area watered, and, if so, the particulars of same. The Committee urge the extension of this work as being highly desirable.

5. With reference to the water supply of the City it is satisfactory to note that the duplicating of the water main is within measurable distance of completion, and it is hoped every expedition will be employed to secure the completion of this urgent work.

6. The Committee urge the necessity of arranging the longest possible time each day during which a supply of water is available to the public, as this is a matter which especially affects the comfort and health of the poorer classes, and the time should, if possible, be arranged so as to embrace the hours during which a supply is mainly needed by them.

7. The Committee note with satisfaction that the hours of street lamp lighting have now been extended to 5.30 A.M. on the main roads, but the Committee are strongly of opinion that the extension should also be carried out on other roads which are in general use at night.

8. The Committee express satisfaction at the introduction of the electric current supply through the town and outskirts of Colombo, which progressive step is the outcome of Ordinance No. 7 of 1902.

9. As regards the prevention of overcrowding in houses, it is noted that only one prosecution took place in this connection, but there is reason to believe that overcrowding exists on a larger scale than the report denotes, and the Committee desire to lay stress on the desirability of this subject receiving the urgent attention of the Chairman, with the view of ascertaining the underlying causes, and, if possible, going to the root of the evil.

10. The Chairman's comments on the subject of Fire Station and Fire Engines are noted; but the Committee have to point out that, so far as they are aware, no provision appears yet to have been made for utilizing the fire engine with advantage, should it be required. This matter is a very important one and immediate steps should be taken to establish an efficient Fire Brigade.

11. The Committee entirely endorse the Chairman's statement that the time of the Superintendent of Works is occupied too much in supervising works of construction, and in their opinion it is very desirable that the Superintendent of Works and his Department should be able to devote more time to the consideration of new works of public utility than be occupied entirely in supervising works already sanctioned.

12. The Committee note with satisfaction that the work of conversion of certain gravelled into metalled roads is to be taken in hand.

13. With regard to the closing of the road between Queen's House and the Pilots' Tower the Committee regret that the Council were not advised in the first instance that the closing was necessary for Military reasons, as in all probability no objection would then have been raised.

14. The Committee trust that the urgently required work of completing the road from Maradana to the Base line will be taken in hand with the least possible delay.

15. The Committee note with satisfaction the negotiations that led to the purchase of land from the Eastern Produce Company, and appreciate the action of Government in giving a strip of land from the Royal College grounds for widening the railway road; and they also note with pleasure the representations to Government which have led to the widening of Seabeach road at a small cost to the Council.

16. Thanks are due to the Government for placing at the disposal of the Council the land necessary for widening the portion of Malay street between the bazaars and the junction with Kew road.

17. The Committee note that the open ground near the Museum has been handed back to Government, and they await the progress of the intended extention to the Museum buildings.

18. The suggested alternative route from Maradana to the Pettah having been found impracticable, the Committee trust that in view of the urgent necessity for widening 1st Division, Maradana, from the Junction bridge to the Terminus, the proposal to meet this want by acquiring land at present in the possession of the Ceylon Government Railway may not be lost sight of.

19. It is noted that money has been spent on repairs to the Lock-gate, &c., but the Committee would point out that the condition of the canal is very insanitary, and that steps should be taken to keep it in a sanitary condition.

20. With regard to the Sanitary Department, it is to be regretted that no quarterly reports to the end of 1902, such as were formerly customary, are before the Committee for consideration with the Chairman's Report.

21. The Committee recognize the growing seriousness of the Lake Fly Nuisance, and, although various experiments to abate the nuisance have been tried and found wanting, they would urge upon the Chairman the necessity of keeping this very important subject before him, and they are of opinion that no effort should be spared to find a remedy for the evil.

22. The Committee are of opinion that dog seizing as also cattle seizing require better supervision than at present. Numerous cases of dogs suffering from disease, as also of ownerless dogs, are to be met with in the streets, and the Committee recommend that special attention should be given to the removal of these animals. In order to avoid infection in the case of dogs seized, the Committee suggest that the carts be partitioned, and one compartment reserved for healthy dogs and the other for diseased. The Committee further consider it advisable that Municipal Inspectors be instructed to report all cases of diseased dogs and cattle found on public streets. It is also suggested that in place of the present leather collar supplied by the Council for dogs, a small metal badge about the size of a fifty-cent piece be substituted. This badge to consist of a split ring to be fixed to the collar, which the owner of the dog should himself be required to furnish.

23. It is desirable in the interest of public security that the regulation requiring latrine coolies to wear badges should be strictly enforced.

24. The Committee consider the experiments with septic tanks of vital importance, and hope this urgent work will be pressed on without delay.

25. It is observed in connection with the licensing and taxing of vehicles and animals that no mention is made of the number, if any, of animals which were found to be in an unfit state to work, although figures are given with regard to vehicles. The Committee have from personal observation noticed the poor and emaciated condition of animals in licensed vehicles, and of bullocks used by the contractors in the carts of the Municipality. In the opinion of the Committee the special attention of the responsible officers of the Council should be drawn to the necessity for reporting all cases where animals unfit for work are being used, and prosecution should be instituted where possible.

26. It is noted with satisfaction that the Municipal Clerical Scheme has been prepared, and the Committee hopes that when the scheme comes into operation no application for increase of salary, &c., will be submitted for consideration except in terms of the scheme.

27. In conclusion, the Committee desire to express their thanks to the Chairman for his services during the past year.

PESTONJEE DINSHAW KHAN,
Chairman, Special Committee.
C. W. VAN GEYZEL.
G. H. ALSTON.
L. CREASY,
Acting Director of Public Works.
JAS. PEIRIS.
SOLOMON FERNANDO.
STANLEY BOIS.
W. H. DE SILVA.
CHAS. PERERA.
CHAS. P. DIAS.
H. A. JAYEWARDENE.
H. TIRUVILANGAM.

See my dissent from paragraphs 8, 10, 11, and 27.

I dissent from paragraphs 8 and 11.

I dissent from paragraph 8.

I dissent from paragraphs 8 and 11.

Colombo, July 4, 1903.

MR. C. PERERA'S DISSENT FROM THE REPORT OF THE SPECIAL COMMITTEE ON THE CHAIRMAN'S ADMINISTRATION REPORT FOR 1902.

WHILE agreeing generally with the report of this Committee, I find I am unable to subscribe my signature to the statements contained in paragraphs 8, 10, 11, and 27.

The report was sent for my signature only yesterday, and I had not the time to enter into details. But I wish to record my dissent from the paragraphs in question as briefly as I can.

With reference to the 8th paragraph of this report and the related matter in 21 and 22 of the Chairman's Report, I must still insist on a point that I had strongly urged before, viz., that the concession to Messrs. Boustead Brothers to lay electric mains was granted without adequate consideration of the rights, interests, and safety of the public of Colombo. Besides, the whole negotiations and procedure were in my view irregular, unusual, and of a character such as to set a most undesirable and disastrous precedent. The application was put down in the Agenda of the meeting of the Council on the 12th September, 1902. The application, which it is alleged, for the confusion was such that even the date was not ascertainable at the time, was of 23rd May, 1902, and was not circulated, in significant deviation in this respect from the standing pratice; but a report from Mr. Cockerill was placed on the table on that day (12th September) purporting to be a report on that application. Till the 20th November, 1902, the application was not printed, published, or circulated among the members; and we came to read it only when Messrs. Boustead Brothers claimed a right to connect their overhead wires at Kollupitiya with their underground main. I refer to the non-publication, non-circulation, and non-printing of the application, as Messrs. Boustead Brothers and Mr. Pagden laid such stress upon the wording of the application in regard to the question of the connection of the overhead wire with the underground main at Kollupitiya, that is to say, sought to make a point of the wording of a document of the purport of which we were kept in entire ignorance till the end of November, 1902. (See paragraph 1 of page 12 of my dissent, marked Z.). The application was rushed through by Mr. Pagden with a haste so extraordinary that I should not hesitate to call it indecent. A large concession, opposed to the usual conditions exacted by European and other advanced countries of the world, and in direct avoidance of the conditions secured in England by Acts of Parliament, was given by the casting vote of the Chairman. Mr. Pagden opposed even the reference of the question to any Committee of this Council and granted the concession for an

indefinite period, with the right to charge private consumers at a rate even very much higher than that paid by Mr. Pagden himself and such of the general public who used it at the time. That among the supporters of this extraordinary measure there were some who are interested in the undertaking, one of them being a member of a firm holding shares in the United Planters' Company, whose interests were acquired by the Electric Tramways and Lighting Company, does not diminish either my surprise or my regret. The troubles of this Council did not cease with this strange act of Mr. Pagden. In November, when this same Company applied for permission to erect a feeder pillar and to connect their overhead with the underground system in Kollupitiya, Mr. Pagden summoned a Special Meeting of this Council to expedite the grant of their application, and when I moved to defer the consideration of the matter Mr. Pagden divided the Council and voted against the question being deferred. Thereafter, he took the unprecedented and astonishing step of referring the report of the Council's Electrical Adviser to the very Company whose application was being considered. He was bound under rule B 10 of the regulations by the advice of the Electrical Adviser, but he found fault with the Electrical Adviser on his non-approval of the application, and asked Messrs. Boustead Brothers to get "independent opinions" on certain points (which he appears to have mentioned to them) from Messrs. Montagu and Macnamara, again introducing a procedure of a most singular, unauthorized, and extraordinary character.

At a meeting of Council on 12th December, 1902, Mr. Pagden moved "that the application from Messrs. Boustead Brothers to allow their representative to be heard in support thereof be allowed,"—a further extraordinary step, the adoption of which was followed by an unseemly wrangle, such as never before had been witnessed in the Council, between Messrs. Boustead Brothers' representative, the Electrical Adviser, and some Members of Council. The Council at last agreed to the following resolution :—"That this Council approves of permission being given to Messrs. Boustead Brothers to erect the pillar in Kollupitiya, but such pillar shall not be connected with the existing overhead line from the Central Station to Kollupitiya, and such connection, if made, shall not be continued, unless the line is at all times efficiently insulated and maintained in accordance with the by-laws, and further provided that the current conveyed by this line shall not at any time exceed seventy *ampères*, and that the voltage shall at no time exceed 2,200. The maintenance of the overhead wire and all proposed alterations or additions shall be subject to the provisions of the Council's by-laws. The permission to be given for a period of twelve months. The Council further agrees to permission being granted for the erection of an overhead low tension service to the Colombo Rowing Club." The Council also resolved, "That, in the meanwhile, the Chairman do refer the matter to the Board of Trade."

This reference was sent by Mr. Cockerill on the 25th April, 1903, to the Chairman, who referred it to Messrs. Boustead Brothers, who replied thereto on 20th May, 1903. In the meanwhile it appears Mr. Pagden left the following minute, dated 5th May, 1903 :—

Memorandum by Chairman on Electrical Adviser's Report No. 55 of 25th April, 1903.

It should be understood that there is no intention to do away with the overhead main which runs from the power station at A to the Galle Face Hotel at B, the erection of which was allowed in 1899. In any case, it is proposed to let it remain for the purpose for which it was erected, *i.e.*, to supply current to the Galle Face Hotel and the Colombo Club.

The real question is whether the connection of this overhead main with the underground main (which starts at the point where the overhead main terminates and runs up Kollupitiya road) should be allowed as a permanent connection, and if so, under what restrictions, if any, as to limit of current and security of the public safety.

The overhead main was erected in accordance with the conditions laid down at the time by the Government Telegraph Department so far as electrical matters were concerned, the Chairman of the Municipal Council confining himself to prescribing the route the main should take through the streets, and no report was made at the time by the Electrical Adviser of the Council, electrical matters (as stated above) being left to the Telegraph Department to deal with.

It was not until 1901 that it was discovered that the Chairman had no power to permit the erection of posts in public streets, and to meet this an Ordinance (No. 7 of 1902) was passed, which empowered the Municipal Council, subject to the permission of Government, to grant concessions for laying electric mains in the streets, and to lay down rules for the guidance of concessionaires. A copy of this Ordinance and of the rules framed thereunder is annexed. These rules are not retrospective.

It is admitted that the existence of the overhead main to the Galle Face Hotel may be a possible source of danger to the public, although it is only fair to state that not a single instance has occurred, since its erection in 1899, of its having caused any damage to person or property. But as it is not proposed to do away with this overhead main, it would appear to me that the most important point is whether the connection of this main with the underground main will, by reason of the additional current passing over these mains, increase the danger, if any, to the public which already exists owing to the erection of the overhead main. In other words, will the increase of current passing along the overhead wire from 24 to 70 *ampères* increase the already existing danger, if any?

A. S. PAGDEN,
Chairman, Municipal Council, and
Mayor of Colombo.

May 5, 1903.

It is a relief, however, to be able to say that, in spite of all this, Mr. Barnard, the Government Electrical Adviser, and the present Electrical Adviser of this Council, recorded the following among other observations :—

It is to be regretted that *permission was ever granted* for this overhead wire to be *extended* either by underground mains or by overhead service to No. 20, Kollupitiya. Messrs. Boustead Brothers' request for permission to erect a switch pillar at the point of connection to the underground mains gives the Municipal Council an opportunity to make terms, and this opportunity should not be wasted.

The Municipal Council should enforce, by any means available—

(1) That the existing wire should *forthwith* be made to conform with the rules as to insulation, distance from buildings, efficient earthing, &c.
(2) That it should, until removed, be maintained in accordance with the rules.
(3) That within a stated period (I suggest three years) the wire should be removed and an underground cable substituted.

This matter is yet unsettled. Arrangements are being made to submit a case to the Council's lawyers. I am unable here to go further into details and comments, so I annex my dissent from the resolution granting this concession, marked Z. That will show the history of the question and the part Mr. Pagden played in regard to it.

I am unable to agree to paragraph 11, which contains the Committee's observations on the statements in paragraphs 41 and 42 of the Chairman's Report.

In the course of an inquiry into certain charges made against a Head Overseer of the Department by the Superintendent of Works, and of the former's replies thereto, the Standing Committee discovered the existence of serious irregularities in the Public Works Department, and on the 9th December, 1901, reported as follows :—

1. All that has come before us has pointed to the necessity of an immediate and searching investigation of the methods of account keeping at present in vogue in the Department of Works, with the view of ascertaining the exact extent of the mischief that it seems certain has already been wrought, and of devising measures that will prevent their recurrence.

2. The suggestion is not altogether new. It is rather the repetition—this time enforced by considerations it is nearly impossible to ignore—of views that have been frequently expressed before, and recalls a series of persistent, but apparently not very successful, efforts to introduce some obvious and necessary safeguards in the management of the accounts of that department.

3. So long ago as 1886 Mr. Wm. Henderson, who was appointed to report on the accounts of the Council, had suggested, in regard to the Department of Works, certain steps for the purposes of account keeping and audit, and appended to his report certain forms, the adoption of which he recommended.

4. Three years later the Council appointed Mr. Grenier to examine the accounts of the Works Department and to offer suggestions as to improvements. He made some suggestions with the view, as he expressed it, of enabling the members representing the taxpayers to see that the funds of the Corporation are fairly disbursed. But with these suggestions the Superintendent of Works disagreed.

5. In 1891 the audit of the accounts was given over to the Auditor-General. He pointed out, and laid stress upon, the necessity of obtaining the sanction of Council when the expenditure on an estimate was to be exceeded or a deviation was made from any of its items.

6. And from time to time the Standing Committee made resolutions in regard to the method of keeping accounts and in regard to the statements to be submitted. These resolutions, this Committee regret to find, were oftener disregarded than observed. Quite recently—during this year—it was pressed upon the Chairman by the Superintendent of Works that the procedure laid down in the resolutions was tedious and unnecessary, and the Auditor-General requested that the officers concerned should be called upon to show cause why the resolutions should not be carried out, and that those resolutions against which no cause could be shown should be carried out at once, and that the Chairman should note his own views in regard to the maintenance of those to which the officers take exception. Among these resolutions of the Standing Committee, it may be noted, were resolutions that had been passed by the Council. One of these is referred to in the Auditor-General's report of 1895, paragraph 9.

7. The necessity for some system that should prevent extravagance, abuses, and frauds was further emphasized by the judgment of the District Court of Colombo in case No. 13,659 of that court. So strongly was this necessity felt that the Member for Kollupitiya (Mr. Morgan) moved in Council for the appointment of a Special Committee to inquire into the criticisms made in that judgment. But the motion was withdrawn as the case had gone up in appeal.

* * * * * *

27. These considerations point inevitably to the existence of a very serious and widespread mischief, and one for which a remedy must at once be sought. The only effectual remedy in our opinion is the appointment of a Special Committee of this Council to ascertain how far the mischief has operated since 1899—since the year, that is, when the books that had before been kept ceased to be kept and the proper checks were abandoned. Such a Committee might also ascertain whether, and how far, it is now possible to recover what has been by abuses and frauds lost to the Council, and it will suggest the means and methods of preventing a recurrence of these evils. Seeing that the amount annually estimated is no less than about Rs. 300,000, we certainly think that strenuous efforts should be made to provide the best checks and safeguards, a work which a Special Committee, with the assistance and guidance, say, of an experienced officer like Mr. Brohier, the late Assistant Auditor-General, will easily and effectually accomplish.

28. In the meantime we consider that it is desirable, if the Chairman has not done so already, to order that the keeping of the books discontinued be resumed at once.

29. We think the clerks and others referred to in the papers should also be called upon for explanations ; and that further action in the whole matter should await a report by the Special Committee we hereby recommend.

J. L. VANDERSTRAATEN, M.D.
CHAS. PERERA.
CHAS. P. DIAS.
ARTHUR ALVIS.
H. A. JAYEWARDENE.

December 9, 1901.

What Mr. Pagden's attitude was whenever any inquiry was made into the working of the Public Works Department may be gathered from his remarks on that report. The Chairman on 11th December wrote as follows :—

I am unable to agree with all the proposals set out in the report of the Standing Committee.

The Council has never, so far as I am aware, prescribed any form of books or accounts to be kept by the Works Department, and resolutions of the Standing Committee on this point are of no binding effect unless confirmed by the Council. The resolutions of Council mentioned in section 6 of the report does not deal with the method of keeping accounts, but is to the effect that the Superintendent of Works is not to over-expend an estimate without authority. I cannot concur in the statement in section 27 (line 5) that the proper checks were abandoned. The report does not state what those checks are, and I have been unable to find that any form of accounts were kept prior to 1899 which afforded any more efficient check on irregularities than those kept since that date ; and for the same reason I cannot concur in the proposal that the books discontinued should be resumed at once."

The remarks of the Auditor-General that very month on the inspection of the books of that department show that the Auditor-General, although he had not before him the proceedings of the above inquiry, discovered independently some of the very irregularities which the Standing Committee found in regard to the books, and found fault with the departure from the practice that had prevailed in the department before Mr. Skelton, without the sanction of the Council or Auditor-General, or Chairman, or Committee, altered the system of keeping the Order Books. The result of the change was to introduce a system of irregularities (described above) which was rather difficult to check or detect, and which could have been more easily discovered, *e.g.*, in regard to orders for materials, had the practice of keeping the Order Books not been altered.

It will be found that it was not lack of information or inacquaintance with the proper method of keeping books, or inappreciation of the expediency of retaining the old and well-tried practice, that induced Mr. Pagden to disagree with the Standing Committee, but an unaccountable bias in matters where the Works Department was concerned, for he records as follows on the Auditor-General's notes on the inspection of books :—

Notes on the Inspection of Books, Municipal Council, 1901.

All articles indented for on the contractors and others are supplied on orders issued by the Superintendent of Works. The order specifies on what particular estimate or vote the articles have been requisitioned. The order forms are kept loose and in duplicate. One goes to the contractor, the other to the storekeeper. A separate book called the "Balance Book," is kept and accounts are opened under each estimate. When articles are ordered under

any particular estimate an entry is made therein of the articles ordered, inserting at the same time the value or probable value thereof, and simultaneously with the entry being made an order on the contractor is drawn out. The book and the orders are then submitted to the Superintendent of Works, who signs the orders after a reference to the entries in the book. In this way the book or the entries in the book are to all intents and purposes an exact counterpart of the order, and it is important, for this reason, that all entries made therein should be initialled by the Superintendent of Works at the time the orders are signed. The system in this respect has undergone a change. All order forms were previously stitched into books and kept in triplicate, the original being retained as a counterfoil of the order. Why, and under whose authority this practice has been discontinued should be explained. This book also serves a double purpose, as it shows the balance available under each estimate. As a precautionary measure, the expenditure is deducted from the block vote monthly to guard against any possible over-expenditure.

When the claims of the contractors and others are received a voucher is prepared and the entries transcribed into the Voucher Book. A separate column provided therein denotes the number of the order on which the articles were purchased, thus establishing a check or means of reference between the Voucher Book and Order Book, and this reference is further extended when the particulars from the Voucher Book are transcribed or posted into the Ledger under the different estimates. The vouchers are next subject to careful scrutiny by the Head Clerk and are then submitted, with the Voucher Book, to the Superintendent of Works, who certifies to the correctness of the voucher and initials and dates the Voucher Book. The dates of the debits in the Ledger merely indicate when the items were posted, and as this is misleading it has been found necessary to suggest that a separate column be opened for date of payment.

Memorandum by Chairman.

The former method of keeping order books in triplicate is being temporarily adopted, pending the consideration of the system of accounts in the Works Department by the Special Committee appointed for that purpose on 13th December.

December 24, 1901.

A. S. PAGDEN,
Chairman, Municipal Council, and
Mayor of Colombo.

On this report of the Standing Committee the overseer in question was dismissed, but before his dismissal, in the course of his defence, there came to light certain gross irregularities which had helped to foster and to conceal the frauds that had been committed. The Standing Committee, on the understanding that the Chairman would call upon the Head Clerk and others referred to by them for explanation, agreed to the following resolution on 13th December, 1901 :—

That K (Head Overseer) be dismissed, and that a Special Committee of this Council be appointed to inquire into the sufficiency of the method of keeping accounts now in use in the Department of the Superintendent of Works and of their audit; and, in case it be found insufficient, to suggest an adequate and appropriate scheme of account keeping. Also to make an investigation into the accounts of the department (so far as they have been kept according to the present system) from the year 1899 to the end of the current year, with the view of ascertaining what losses, if any, this Council has sustained by irregularities on the part of the subordinate officers of the department, and how far those losses may be recoverable. The Special Committee so appointed to have power to engage and pay for the services of a competent person in making the necessary examination and suggestions.

That Committee appointed Mr. H. A. Martin, Government Financial Assistant and Accountant, Public Works Department, to make the necessary examination into the method of keeping accounts and to investigate into the accounts of the department for the years 1899, 1900, and 1901 as regards their audit, and to suggest an adequate and appropriate scheme of acccunt keeping. Mr. Martin has sent three reports of his examination into the accounts of these three years, and has also sent some suggestions for future guidance.

He pointed out a large number of irregularities and discrepancies in the accounts and books of the Works Department, which he suggested should be referred to the Works Department for explanation, dividing them into various heads, such as :—

Orders for which payments have apparently been made twice.
Items debited to one estimate and credited to another.
Posting in the Ledger not agreeing with the supporting voucher.
Where savings should have been effected.
Orders ordered on one estimate and debited to another.
Materials paid for in excess of orders.
Items debited in Ledger not supported by Order Book.
Items appearing in Order Book, but not debited in Ledger.
Debited in Ledger, apparently not supported by vouchers in file.
Wrong posting in Ledger.
Orders which appear in Order Book, but not debited in Ledger; and a large number of various other discrepancies and irregularities.

At the instance of the Chairman, at the meeting of Council of 9th January, 1903, the subject matter of reference to the Special Committee was referred to the Standing Committee on Municipal Works, and I find from the minutes of that Committee of the 24th January last that some of the points in the reports made by Mr. Martin to the Special Committee were referred to the Superintendent of Works. But before any explanation thereon has been received the Works Committee submits a report to Council to increase the salary of the Superintendent and to increase his staff, based on letter No. 43 from the Superintendent of Works dated 19th January, 1903, which, as I have already pointed out, is erroneous and misleading.

The Special Committee was, however, summoned very seldom ; the inquiry was not expedited ; the matters pointed out by Mr. Martin were not promptly referred to the Superintendent of Works for explanation, although Mr. Martin required it to be done. In fact, nothing was done to get any explanation from the Works Department, except that, at my instance, a few of the irregularities pointed out by Mr. Martin were referred to the Superintendent of Works for explanation. The explanations thereon were delayed, and when received were not considered till 1903. Then the Chairman, Mr. Pagden, proposed (and there was no hope of successful opposition) to refer the matters which were then under inquiry, and which the Council had referred to a Special Committee, to the Standing Committee on Public Works, whose members, he ought to have been aware, did not know the past history of the working of the Public Works Department branch of this Council. (Some insight as to the working of that department may be obtained from a memorandum of the Standing Committee, filed with the Committee's Report on the Chairman's Administration Report of 1894, and marked Y.) This Committee after referring some matters reported on by Mr. Martin to the

Superintendent of Works for explanation, and before his explanation was received thereon, recommended to this Council, as they stated, "the scheme laid down in Superintendent of Works' letter No. 43 of 19th January, 1903, leaving the question of the precise nature and extent of the duties of each officer to be determined from time to time by the Superintendent of Works, subject to the general directions of the Chairman," and also recommended that the Superintendent of Works' salary should be increased to Rs. 10,000—a sort of reward apparently for the unauthorized innovation that brought about so many irregularities, and for the neglect to bring them to the notice of the Chairman or Council, or to call attention to the losses which the Council suffered by reason of this irregular and careless procedure and manner of work! The reason which the Superintendent of Works gave for the scheme was that a very large expenditure was incurred by his department, and that he required a larger staff. The Superintendent of Works stated in his letter No. 43 of 19th January, 1903, "at the lowest estimate the annual expenditure must be estimated at Rs. 750,000 with early prospects of its increasing to Rs. 1,000,000," and this Committee, or rather the Chairman, forthwith not only recommended this scheme but an increase to the salary of the Superintendent of Works for having formulated such a scheme. Mr. Skelton was appointed on a salary of Rs. 4,500 with biennial increments of Rs. 500, commencing from 1st January, 1893, until it reached a maximum of Rs. 8,000. Thus he was entitled in January of this year to draw a sum of Rs. 7,500 as his salary, with Rs. 960 as horse allowance, now raised to Rs. 1,200 as conveyance allowance, whereas if he had remained in the Government Public Works Department, which he joined in August, 1888, he would be drawing now Rs. 5,000 only. The Council, however, whilst increasing the establishment, grants him a salary of Rs. 8,000 from 1st January, 1903, with further annual increments of Rs. 500 until Rs. 10,000 is reached.

The Municipality of Madras, with a larger revenue and a larger expenditure on public works, I find, has only two Engineers, one called the Engineer and the other Assistant Mechanical Engineer.

With regard to the statement of the Superintendent of Works that the expenditure on works hitherto was Rs. 750,000 a year, with the early prospect of its increasing to a million, I should observe that it is not borne out by facts which must have been known to the Superintendent of Works and the Chairman. The expenditure of the Public Works in 1887, the year in which the Municipal Councils' Ordinance was passed, was Rs. 76,325; 1888, Rs. 95,316; 1889, Rs. 126,956 (in February of this year Mr. Skelton joined the Municipality). Then, taking the expenditure from 1896 to 1902, it is as follows:—

	Rs.		Rs.
1896	209,724	1900	232,102
1897	249,259	1901	270,434
1898	228,955	1902	284,007
1899	277,270		

In no one year from 1887 to 1902 has the expenditure of the Public Works Department of this Council reached Rs. 285,000. Yet this Committee and Mr. Pagden, without any inquiry, accepted and recommended the scheme to the Council. It is doubtful whether in the future the annual expenditure will ever reach Rs. 200,000, considering that the Council has to provide for the contribution to the Mansergh Drainage Scheme and enhanced expenditure on lighting and water, which is increasing year by year, as a large number of streets that were not supplied with either or both are now being supplied. The balances hitherto remaining were mainly from the recovery of the assessment rate, as the rates collected for the extension of lighting and water remained unexpended for a number of years. But with the extensions that are now being made in both lighting and water there will remain no such balances in the future. Whence then is the Council to provide for additional Engineers and their staffs, and for works for their employment? I say, without fear of contradiction, that not even the additional 2½ per cent. assessment rate which it is intended to levy will suffice to meet these charges, and that the expenditure on public works will have hereafter to be even much less than it has been. What justification then was there for Mr. Pagden to add to the permanent cost of the establishment of the Public Works Department alone about Rs. 25,000 to Rs. 30,000 a year by recommending this scheme? If only he had made proper investigation into the irregularities and into the losses this Council yearly suffers from the mismanagement of the Public Works Department, it would have enabled this Council to cause a saving of at least Rs. 50,000 a year thereby (see the memorandum of the Standing Committee of August, 1895, herewith annexed, marked Y and Z). I should like to know what balances of materials, &c., have remained in each year for the last sixteen to seventeen years of Mr. Skelton's administration of his department. It cannot be denied that on an average Rs. 200,000 a year was spent on public works. What are the balances remaining in bricks, timber, lime, &c., on each estimate each year? Or have the overseers used up every single brick and rafter provided for in the estimates and received from the contractors? Were there any balances shown and credited each year? Except, perhaps, the inappreciable return of surplus materials in the stores accounted yearly to the Audit, no balance materials from the working parties have been accounted. People who take large contracts of Rs. 200,000 or Rs. 300,000 have always to sell large quantities of surplus materials when their work is over. What are the savings in the Municipal Council under that heading every year? I must also call attention to the way in which the upkeep estimates of this Council have risen, *e.g.*, road upkeep with no appreciable additional mileage of roads, and with the advantages of labour-saving machinery, *e.g.*, steam rolling and the savings of water carts, &c.

The road upkeep estimates have enormously increased in value. Of course, the prices of metal and gravel have risen. But inquiry is particularly necessary as to the increase of cost in other respects, and also in regard to the increase on other upkeep works, for I have often found in Standing Committee that works for which special estimates are provided were done under upkeep estimates, and the cost charged thereto. This shows that either the money provided for in the special estimates ran short, or that the money drawn on upkeep estimates was drawn without any expenses being incurred. Often thefts of Municipal materials, such as cement, gravel, &c., have taken place, and the thefts have been detected casually by the Police, while the department has done nothing towards their detection. There are cases where Municipal employés have brought it to the notice of the Chairman that private work had been done in the Municipal workshops, but no attention was paid to the complaint. It has always been found that whenever works, even upkeep works, were done departmentally they annually increased in their cost; but no sooner were they given on contract than their cost diminished.

The Superintendent of Works is generally opposed to works being given on contract, and I annex a dissent which I had entered, marked X, in July last year, in which I referred to the opinions of the Public Works Commission of 1880 and 1901, the report of Mr. Ellis in 1901, &c., to which are also attached the reports of Mr. Martin on the accounts of the Public Works Department branch of this Council for the years 1899, 1900, and 1901. The amendments that often became necessary to estimates framed not only caused delay but loss to the Council: *e.g.*, in case No. 14,678, District Court, Colombo, Framjee Bhikajee *v.* the Municipal Council, costs had to be paid by the Municipal Council, although the case was settled.

Another fact which I have to note is Mr. Pagden's discontinuance of the keeping of all records that hitherto acted as a check on the expenditure of this department—especially the details that used to be furnished on works which have no special estimate or items of charge, such as are required in the estimates of the Public Works Department of Government,—the diaries and periodical reports of the Superintendent of Works, the submission of completion reports to Members of the Ward when a work was completed. The discontinuance of these records went to prevent the Members representing the taxpayers from seeing that the funds of the Corporation were fairly, properly, and economically expended. In fact, Mr. Skelton himself, when he disagreed with Mr. Grenier's method of keeping the accounts of the department, wrote:—

> I may add that the system that has grown up under the pressure of the Standing Committee when thoroughly started is capable of connecting together the whole of the various stages from the order for materials to the complete statement of a perfected estimate, in such a manner that the accounts can, if need be, be audited or examined and tested by Members of the Council. In conclusion, I will only refer again to the entire absence of any reference to these absolutely necessary books, and I trust that the Council will not permit the result of so much hard work and thought upon the part of the Standing Committee being set aside for a scheme which is not clear from the report, and may hereafter be found useless.

This tendency to avoid publicity, so that information could not reach the Members and the Chairman's or Superintendent's action could not be called in question, was very strongly marked in the case of Mr. Pagden. It may be discovered, for instance, in his refusal to give information even in Council, and, when obliged, giving it in an imperfect and unsatisfactory manner. The refusal to give information touching works done by or under the authority of the Superintendent of Works by the Chairman is characteristic. A respectable European firm, who had tendered to supply cement for Municipal works, informed me that their sample of cement, which they submitted with their tender, was returned after some delay unopened, and desired to know the reason. I forwarded their letter to Mr. Pagden, and I received no satisfactory reply. I therefore moved in April last "that the result of the tests made by the Superintendent of Works of the various samples of cement submitted in connection with tenders for the supply of cement during 1903 be laid on the table," and moved for papers.

A similar motion had been made in the Legislative Council scarcely a month before, and the Government accepted the same, and the papers were published for the information of the general public. But Mr. Pagden's policy was far otherwise, and with his majority he carried his point and avoided publicity. I had heard before of the complaints of other tenderers too. This secrecy, however, was one of the methods by which Mr. Pagden evidently thought to secure the interests of the taxpayers in the purchase of materials, &c., for the works of the Municipal Council.

Mr. Pagden always had an objection to furnish information to the public or give any opportunity to the public to discuss any matter that came before the Council for consideration. In fact, publicity he generally avoided, and I was obliged on 13th March last to ask "whether all the papers laid on the Council table, unless such as for any reason may be marked confidential, are not available to the Press," and moved for papers.

The Chairman replied "that all printed papers which are circulated among Members are available to the Press after the items in the Agenda paper are disposed of, unless for any special reason publication was not desirable." But I found that not only papers that were laid on the table, but sometimes even the Agenda for consideration by Council, were kept back from being sent for publication to the Press.

To give a few instances where Mr. Pagden avoided giving information to the Council and the public—

In April last I had to put a question in Council to get information as to whether an accident did really happen in his house, which caused the death of his horse, by the falling of the electric wire. Although he must have been aware that immediate notice of it should be given to the Council, and the Electric Company did give that notice in terms of rule 15 of the regulations made under section 25 of Ordinance No. 7 of 1902, he did not give the information, and when the Press representatives went to him for it, both before and after my question in Council, he avoided giving the information, although the papers were laid on the Council table on my motion.

In March last, when the matter of the overcrowding of the tramcars was brought to my notice, I asked him whether he had licensed all the tram cars, and what extent of space in each car had been allotted to each passenger. He seriously replied that the sitting space was ascertained by actual experience, and a reasonable amount of standing room allowed—so that Mr. Pagden, by virtue of the powers given him as Chairman by Ordinance No. 9 of 1901 to license vehicles, introduced standing room into licensed vehicles.

To give an instance of how questions were evaded, I have to point out that I had to put three separate questions at three different meetings to get the following answer:—"The Chairman replied that he is informed that the power transmitted from the generator at Gasworks street to Galle Buck station is carried on by an overhead conductor as far as the National Bank corner, and thence by an underground main to Galle Buck, and that he is unable to trace any permission having been granted for this by the Chairman."

The three separate questions that I put were the following:—

In March last I asked whether for lighting the electric arc lamps in the Fort the current used is from the underground main laid from Galle Buck station or from the overhead wire running from central station at Gasworks street, and moved for papers,—to which he replied that Messrs. Boustead Brothers had informed him that the current used was from the underground mains.

In April last I asked whether for lighting all the electric arc lamps in the Fort the current used is that generated at the Galle Buck electric station, or that at the central station at Gasworks

street, and moved for papers. The Chairman replied that he was informed that the various underground mains supplying the Fort arc lights were fed from the arc lighting switchboard at Galle Buck station, and that in its turn this switchboard was fed partly from generators situated at the generating station in Gasworks street.

In May last I asked whether the current used from the generators in Gasworks street to light the electric arc lamps in the Fort was carried by an overhead wire from the station in Gasworks street to the arc lighting switchboard at Galle Buck station, and if so, whether it was done with the permission of the Chairman, and moved for papers.

It was only to the last question that he gave anything like a satisfactory answer. Although at the putting of each question before that I explained that I suspected there was an overhead wire running towards the Fort from Gasworks street, and that I suspected the Company were getting their electric current to light the Fort arc lamps through that wire, yet he gave the answers in March and April, as stated above, nor did he seem to be concerned at the evasive character of his replies.

I had again to bring two motions in Council to get a letter addressed to the Council to be laid on the table, in which the Colonial Secretary specially asks that it be submitted to Council.

The first motion was made in March, but as my clerk referred to the letter as No. 147 instead of No. 144, although the date was correct, Mr. Pagden did not lay it on the table. Next I had to move again in April. Then, although he did lay it on the table, when Press representatives wanted it the Secretary declined to give it to them without permission, and so the thing was put off.

I came across a licensed carriage which had no licensed number painted thereon, as required by the Ordinance, nor any fare table affixed thereto, as required by the by-laws. So I put the following questions in May last: "Whether the proprietor of any carriage licensed under Ordinance No. 9 of 1901 has been exempted by the Chairman from compliance with the provisions of section 2 of the said Ordinance, which requires the licensed number of the carriage to be painted and a numbered plate to be affixed thereto. If such exemption had been granted, I move for a return of the names of persons so exempted."

The Chairman replied in the negative. But to my surprise I learnt afterwards that owners of carriages did obtain licenses by which the Chairman did exempt them, although of course it was illegal to do so. I cannot understand the reason why Mr. Pagden, who had several days' time to answer my question, should deliberately give an erroneous and misleading answer. When I wrote about the same matter to the present Chairman the outcome was signally different. The information asked for was readily given.

I have also to call attention to the manner in which Mr. Pagden created offices and appointed men to those offices.

During his term of office he created offices and increased salaries to such an extent that it will cost the Council a sum of about Rs. 50,000 to Rs. 60,000 more than it had cost during the time of his predecessors. And this will become a permanent charge if the offices are legalized, as I have pointed out before (see my dissent hereto annexed and marked W), and the Minutes of Council of 14th March, 1866 (copy of which is hereto annexed and marked V), when Messrs. Advocates Berwick, Ferdinands, Lorenz, Alwis, and Hon. Mr. F. C. Loos were of opinion that by-laws were necessary to create offices. (See annexure V.)

Ignoring the sound and wholesome rules of Government, Mr. Pagden, when creating an office, attached to it a conveyance allowance instead of a horse allowance, so that the present Sanitary Officer with only a rickshaw to go about in draws Rs. 80 a month, and so do others. Of course, as the Chairman had two horses, he did not care to alter his allowance to a conveyance allowance. He got, however, his allowance increased from Rs. 80 a month to Rs. 100.

Mr. Ellis in his report of 1901 stated: "I believe that the Municipal establishment is sufficient for the proper performance of all Municipal duties, but I am not satisfied that the work is as well distributed as it ought to be." "I am not sure that the Council always gets full value in work for the amount paid in salaries." "I am not satisfied that sufficient care is taken in the matter of appointments. I find that applications are rarely called for by notice or advertisements. Even offices of the value of as much as Rs. 720 are filled up in this way. It is very desirable that where vacancies occur every effort should be made to secure the best men. Now, that Municipal officers receive pensions, there should be a keen competition for employment, especially as it is not necessary to pass any examination."

But how were officers selected during Mr. Pagden's term? In some cases the places were advertised for, but no qualifications necessary for the office were stated. In some cases people who answered the advertisements were refused, and outsiders who had never applied were chosen. The selections were left to the Heads of Departments, and by them in turn to others. I learn that one of the Heads of the Departments selected candidates by writing to some of them to attend at his private residence and made the selections there. The advertisements and selections appeared to be a farce altogether.

Mr. Pagden during his term not only added largely to the establishments, but in January last, by his casting vote, made the Council liable to the payment of about Rs. 200,000, which has become necessary for the modification of the Mansergh Scheme, owing to the construction of a wet dock in Colombo.

But the task is endless, and I have neither the time nor the inclination to lengthen the list of acts and omissions which go to show either the incredible incapacity or the persistent disregard of clear law and settled and authoritative custom which marked Mr. Pagden's tenure of office. It is no pleasant thing to dwell on them. From a personal point of view I should be glad to overlook them. But the place I hold is one of trust, and I cannot but feel that in view of what I have here stated, and of my attitude towards Mr. Pagden's modes of procedure, it would be a betrayal of my trust and a piece of glaring hypocrisy were I now to assent to a paragraph which thanks him for his services. On the contrary, I feel too deeply, and am forced to express as plainly as I can my strong conviction, that Mr. Pagden's conduct of the administration has done the greatest disservice to the Municipality that it has ever sustained. I heartily wish I could say otherwise, but I must be forgiven if I have to add that it is impossible for me to do so.

CHAS. PERERA.

Colombo, July 10, 1903.

ANNEXURE Z.

Dissent on Resolution No. 2 of September 12, 1902.

Minutes of Proceedings of a General Meeting of the Municipal Council of Colombo held at the Municipal Office on Friday, September 12, 1902.

2. Application from Messrs. Boustead Brothers for extending their electric mains in Colombo was laid before the Council.

Mr. C. Perera moved—That the application be referred to a Special Committee, consisting of the Chairman; the Hon. Mr. F. A. Cooper, C.M.G., Mr. F. H. Grinlinton, Mr. Arthur Alvis, Mr. James Peiris, Mr. H. A. Jayewardene, and the mover, to consider and report on what terms and conditions the Council will allow the application.

Mr. Arthur Alvis seconded.

Council divided on the motion as follows :—

Ayes.	*Noes.*
1. Mr. M. L. M. Zainudeen.	1. Dr. Solomon Fernando.
2. Mr. H. A. Jayewardene.	2. Mr. James Peiris.
3. Mr. Arthur Alvis.	3. Major A. W. de Wilton.
4. Mr. R. H. Morgan.	4. Mr. P. D. Khan.
5. Mr. C. P. Dias.	5. Dr. C. T. Griffin.
6. Mr. C. Perera.	6. Mr. D. W. H. Skrine.
7. Dr. J. L. Vanderstraaten.	7. The Chairman.

Ayes, 7 ; Noes, 7.

The Chairman having given his casting vote against the motion, the motion was lost.

The Chairman thereupon moved:—That the application of Messrs. Boustead Brothers be granted, subject to their complying with the rules and regulations passed by the Council at its meeting on August 8, 1902, and the conditions laid down by the Council's Electrical Adviser in his report No. 804 of September 10, 1902, and that Messrs. Boustead Brothers be informed that the Council by giving this concession grants them no monopoly for laying electric mains in Colombo, and reserves to itself the right, should it see fit to do so, of amending above-mentioned rules and regulations in such manner as may be found necessary to secure the safety of the public.

Mr. P. D. Khan seconded.—Carried, Mr. C. Perera dissenting.*

The following documents were laid on the table :—

Return of Committees of Municipal Council for 1902.
Proceedings of Committees.
Diaries of Superintendent of Works, Sanitary Officer, and Assistant Municipal Engineer.
Volunteer Band programme for September, 1902.
Return of average daily supply and consumption of water for August, 1902.
Letter No. 105 of August 22, 1902, from the Colonial Secretary, regarding the closing of Flagstaff street to the public.
Rules for laying the electric mains, as revised by lawyers. (See *Ceylon Government Gazette* of November 21, 1902, pp. 924–925.)

REASONS FOR MR. C. PERERA'S DISSENT FROM THE ABOVE.

PERHAPS it would be best to preface what I have to say with a recital of the matters that culminated in the resolution from which I am compelled to dissent. Such a recital would in itself reveal the irregularities that have marked the conduct of this affair, and the injury which would be done, both to the rights of the Council and the interests which the Council is supposed to safeguard, by the carrying of that motion.

1. It will be remembered that in 1900, when Messrs. Boustead Brothers made an application to lay an electric main from the tramway works to the Kochchikada grain sheds, I raised the question whether the Council had the power to grant it.

2. On the 26th July, 1901, the Chairman, Mr. Pagden, wrote to our lawyers inquiring what are the powers of the Council in regard to the laying of electric mains in the streets—

(*a*) To give privileges to companies or private persons to break the roads and lay such mains.
(*b*) To receive payment for the privilege.
(*c*) To lay down rules for the observance of persons holding such a privilege.

3. On the 22nd August, 1901, Messrs. Boustead Brothers called attention to their application; and on the 9th September our lawyers forwarded the opinion of Mr. Advocate de Sampayo, to the effect that the Municipal Council had no power then to grant permission.

4. On the 11th September, 1901, the Chairman wrote letter No. 109 to the Hon. the Colonial Secretary, requesting that powers might be given to the Council to permit laying down of electric mains and services, to receive payment for such permission, and to frame rules therefor.

5. Meanwhile, on the 4th October, 1901, a letter dated 16th September, from Messrs. Delmege, Forsyth & Co., applying for permission to lay down an underground pipe line to convey petroleum from Kochchikada to the Railway premises at Maradana Junction and to the goods yard, was submitted by the Chairman to the Standing Committee, who were of opinion "that the Council has no power to grant the permission asked for, and in any case they are not prepared to recommend it."

6. On the 15th October, 1901, the Hon. the Colonial Secretary, in reply to the Chairman's letter No. 109, requested that the Council would cause an Ordinance to be drafted, "as the Council considered desirable, for the purpose of giving the Municipal Council the required powers." The Government, he intimated, would then request the Attorney-General "to incorporate the same into the amending Draft Ordinance already drafted by him." This letter of the Hon. the Colonial Secretary was forwarded to the Council's lawyers, who, on November 7, 1901, sent a draft

* This is not correct. Others besides Mr. C. Perera dissented.—C. P.

"which was submitted by the Chairman to a Special Committee appointed on October 17, 1901, to consider the Chairman's memorandum, with reference to the method of recovery of vehicles and animals taxes and assessment of properties, and to deal with such other proposals as may be brought up before the Committee by the Chairman."

7. On the 15th November the Special Committee resolved that the Draft Ordinance be referred to the Council's Electrical Adviser. It seems also in the meanwhile to have been referred to Mr. Skelton, who objected to the powers conferred on the Council by clause 8, which is almost the same as section 25 of Ordinance No. 7 of 1902. Mr. Skelton noted: "Clause 8 includes powers which it is dangerous to possess. A grant once given should be on conditions which remain unalterable. New grants may be on amended conditions; but the conditions of a grant should not be varied once the grant has been made."

8. On this the Chairman observed: "Grants will be executed under conditions existing at the time. No subsequent alteration will effect them."

9. On the 2nd December, 1901, the Electrical Adviser wrote as follows:—

In reply to your letter No. 1,978 of November 16, I have the honour to hand you herewith my report on the above subject. The Chairman having pointed out the urgency of the matter, I have only dealt with the Draft Ordinance, as the question of rules could be left for another time:—

(*a*) The draft rules for the Ordinance which have been prepared are unsatisfactory from an electrical standpoint, because the Council's electrical rights are not protected; the protection of the Council's property is not very clearly shown, and the safety of the public from danger is not sufficiently insisted upon.

(*b*) I regret that on account of the urgency of the matter I am unable to give the full text of what I think the Ordinance should contain. I am only able to give the outline of the subject, with the particulars of the place where the full text may be found. [Then follow provisions on the lines of the Electric Lighting Acts, 1882 and 1888.*]

10. On which the Chairman made on December 4, 1901, the following memorandum:—

The Draft Ordinance and rules have been already printed and circulated, and were referred to the Council's Electrical Adviser, whose report is now annexed. The Ordinance, as it stands, may be adopted, as it gives the Council power (sec. 6) to lay down any conditions it may wish. The conditions and rules can all be settled later on; but the Ordinance should be put through promptly, or the Government will probably pass one themselves without consulting the Council at all if this matter is delayed.

11. I thought, however, it would be necessary to pass an Ordinance, as I disliked the too comprehensive wording of section 23 of the present Ordinance No. 7 of 1902, and feared there was danger of losing the safeguards which the public would have, and ought to have, of a reference to the Secretary of State, whereby expert advice would be available, as it is in England in legislation in matters of this kind. And I had good grounds for my apprehension, for my experience in the matter of the tramway concession was that a narrow majority of the Municipal Council granted a larger concession in favour of the concessionaires than they were authorized to do under the Tramway Ordinance, No. 5 of 1873. So that after the Council had adopted the agreement on July 10, 1896, they had to amend it to make it consistent with the Ordinance. (See Annexure A.) But in view of the Chairman's explanation contained in his memorandum (December 4, 1901), referred to above, I was induced to withdraw my opposition; and as I then thought there was nothing in the Draft Ordinance to prevent the Council incorporating the provisions of the Electric Lighting Acts of 1882 and 1888 into the rules to be framed under section 25, I wrote on December 9, 1901, suggesting that "the legal adviser of the Council be consulted on the question whether the words of clause 6 of the Draft Ordinance sufficiently cover the requirements specified in the report.

12. That letter of mine was referred to the Council's lawyers, who then amplified clause 6 (now section 23 of Ordinance No. 7 of 1902) to this effect: "It shall be lawful for any Municipal Council from time to time to grant any person or persons, firm, company, or corporation, licenses or concessions, whether sole and exclusive or otherwise, *to supply electricity for power or lighting, whether public or private or for any other purpose that the Governor, with the advice of the Executive Council, may approve for such period, whether limited or unlimited,* and for such consideration and subject to such regulations *as to the limits within which and the conditions under which a supply of electricity is to be compulsory or permissive, and for enforcing the performance by the licensees or concessionaires of their duties in relation to such supply, and for revocation of the license or concession where the licensees or concessionairies fail to observe such regulations or to perform such other duties, and the licenses or concessions generally may contain or be subject to such further regulations, terms, and conditions in all other respects* as such Municipal Council may think expedient."

13. This draft was referred to the Special Committee appointed on the 17th October, 1901, as aforesaid, who adopted the draft on the 11th December, 1901, with the Chairman's further suggestion that it was desirable to extend the powers "given by the Ordinance to the granting of concessions for any purpose other than the supply of electricity as may be approved of by the Governor and Executive Council." This report of the Committee was adopted by the Municipal Council on December 13, 1901, and forwarded to Government on the 14th December, 1901; and the Chairman while forwarding the same asked what regulations, if any, the Government intend to introduce to protect the public from injury from electricity, and to control generally the supply of electricity. To this the Hon. the Colonial Secretary replied on January 16, 1902, suggesting the alteration of the position of the words "that the Governor, with the advice of the Executive Council, may approve" in clause 6, line 4, and the insertion of a proviso at the end of the clause that no concession shall be made without the approval of the Governor, with the advice of the Executive Council; and inquiring "whether the amendment meets the views of the Municipal Council;" and stating that the regulations for the protection of the public from injury from electricity are receiving the consideration of Government. No intimation as to the action of Government in regard to this last-named matter has been received up to the present moment.

14. To this slight amendment of the Draft Ordinance the Municipal Council agreed on 10th January, 1902, and disposed of the matter at that meeting, though it was not included in the Agenda of that day's meeting.

15. On the 13th February last the Chairman called the attention of the Electrical Adviser to paragraph 1 of his letter of December 2, 1901, and asked to be furnished with draft rules under clause 8 of the Draft Ordinance.

---

* See Annexure E.

16. The Ordinance No. 7 of 1902 was passed on April 14, 1902. Here it may be noted that the important and necessary provisions contained in the words underlined* in the Draft Ordinance in paragraph 12 above were omitted, and omitted without any reference to Council, although it was deemed necessary to call the attention of Council to the trifling amendment in clause 8. (See paragraph 12 above.)

17. The Electrical Adviser, as requested by the Chairman, after conferring with Messrs. Boustead Brothers, as requested on May 4, 1902, forwarded a book containing the Board of Trade rules with certain alterations that he had suggested. The rules and the indicated alterations were printed on May 17, 1902.

18. Note here that, although Messrs. Boustead Brothers, in their letter of May 26, 1902, while acknowledging receipt of the draft electricity rules, state that they are Board of Trade rules as amended and mutually agreed upon between Mr. Cockerill and themselves, on May 26, 1902, they nevertheless went on to raise further objections. For instance, as to rule 16, Messrs. Boustead Brothers suggested "that the Chairman of the Municipal Council be written to instead of the Municipal Council;" against which the Chairman noted "No objection." Against some other rules the same note was made by the Chairman, while some others were noted for the "opinionof Mr. Cockerill;" and after several consultations with Messrs. Boustead Brothers, the Superintendent of Works, and Mr. Cockerill, clauses Nos. 11, 13, 16, 17, 20, 21, 32, 39, 49, 50, 54, 56, 57, 60, 64, 65, 67, 69, 71, and B 2, 3, 6, 9, and 10 were altered, added to, or omitted from the rules framed and mutually agreed upon between Mr. Cockerill and themselves. In some cases it is curious to find "the Chairman" substituted for "the Council," as suggested by Messrs. Boustead Brothers, and in several others the rules were modified for the most part to suit their proposals and objections.

19. This summary that I have attempted clearly discloses the following facts and characteristics, which, I submit, merit the most serious consideration :—

(1) Although the Council's legal advisers and its Electrical Adviser felt the need, and suggested the expediency of providing an Ordinance on the lines of the English Lighting Acts of 1882 and 1888, and the draft of clause 6 in Draft Ordinance, now section 23 of Ordinance No. 7 of 1902, as suggested by the legal advisers was accepted by the Municipal Council and apparently by Government, yet the underlined* words in paragraph 12 above were omitted therefrom.

(2) That although the Chairman in his memorandum of December 4, 1901, stated: "Conditions and rules can all be settled later on," all the rules from the model order of the Board of Trade (as I learn from the Electrical Adviser) have not been included, and their non-inclusion is due to the insertion of clause 8 B now deleted, viz.: "These regulations are made subject to the power of the Council to make such further or other regulations as they may think expedient."

(3) Those rules only have been adopted which Messrs. Boustead Brothers agreed to; other rules, most necessary in the interest both of Council and the public, finding no place.

(4) The suggestions made by the Electrical Adviser on the 2nd December, 1901, have not been adopted yet, although on that head the Chairman noted: "The conditions and rules can be settled later on."

(5) According to the Electrical Adviser, some of the rules were altered by way of compromise because Messrs. Boustead Brothers objected to them; and some were agreed to on the ground that the conditions in England were different from those in Ceylon; and some because he thought they related to matters which it is for the Council and the Chairman to decide, *e.g.*, as to whether "the Council" or "the Chairman" should be inserted in the rules.

(6) Mr. Cockerill in his letter No. 762 of July 7, 1902, writes: "It was agreed that the word 'Council' be altered to 'Chairman' in clauses 11, 13, 60, 71"; to which the Chairman replies on July 10, 1902, to the following effect: "I propose to introduce a general rule at the end to this effect," and suggests rule 10 B, a reply containing a provision manifestly inadequate to the grave circumstances pointed out by the Electrical Adviser.

(7) In spite of what he noted against Mr. Skelton's objections regarding the alterations or conditions of grant by the framing of fresh regulations, the Chairman subsequently omitted the following: "These regulations are made subject to the power of the Council to make such further or other regulations as they may think expedient," words which the Electrical Adviser had inserted from the regulations appearing in the extract which he had taken from the Board of Trade regulations.

(8) When these rules were submitted to Council on the 8th August last the report from the legal advisers, to whom they had been referred, had not been received, and yet the suggestion made by me for a reference of the matter to a Special Committee was not adopted.

20. The urgency pleaded by the Chairman nowhere appears. The proceedings certainly do not show that any special regard was given to it. The reference to a Committee would not have taken up more time than (if even as much as) was consumed in these conferences and correspondence.

So that whilst so important a matter failed to receive the consideration usually and rightly given by a Special Committee, nothing was gained in point of despatch, for consultations appear still to have gone on between the Chairman, the Electrical Adviser, the legal advisers, and Messrs. Boustead Brothers. (See Annexure D.)

I do not see why the interval should not have been utilized by a Special Committee for a full consideration of the matter.

Further, it was objected by the Chairman that a Special Committee was unnecessary because the Electrical Adviser had approved the rules, and that any references to a Special Committee would tend to delay; and that even if a Special Committee were appointed, these were matters dealing with technical subjects such as only Messrs. Cooper and Warren could judge of. I dissented because that was not the fact. I do not think that these members alone are acquainted with the matters under consideration, nor that they can judge about them better than many of us can. Besides, the statement of the Chairman was in direct contradiction to his own act. The very circumstance (which I found from a cursory glance at the papers in the file) that the Chairman has been deciding on some of the questions raised by the technical officers serves to prove, if proof were needed on so simple a

* The words underlined are given in italics in this publication.

point, that it is perfectly possible for lay or non-professional men to decide (as judges in courts and public administrators of various kinds are every day compelled to do) after hearing the opinions of experts, what may be desirable in the public interests, even though they may not be specialists on the subject upon which they hear expert opinions. However, the Chairman was determined that the rules as framed should pass, and the motion to adopt the rules was carried.

On the 12th September the Chairman had in the Agenda for that day the following: "Application from Messrs. Boustead Brothers for extending their electric mains in Colombo," and a printed report thereon from the Electrical Adviser. (See Annexure B.) No date of this so-called application was given, and from the file of papers I received only on the 7th instant I find the "application" referred to is a letter of June, 1901 (see Annexure C), which was for the first time submitted to Council on 12th September last, fifteen months after it had been received, and five months after the passing of the Ordinance No. 7 of 1902, as the concession which Messrs. Boustead Brothers had applied for under section 23 of the Ordinance No. 7 of 1902, an Ordinance which had then not yet been passed nor was even under contemplation. This "application" was not circulated among the members, although the report on it by the Electrical Adviser was.* In the same Agenda of the business of the meeting it was noted that the "rules for laying electric mains, as amended by the lawyers" were laid on the table; the amendments were made both by the lawyers and Superintendent of Works. (See Annexure D.)

In the discussion of the motion to refer the "application" to Special Committee I drew attention to the draft rules that were noted in the Agenda as being laid on the table with amendments made thereto after they were submitted to the Council on August 8 last; but the Chairman overruled me, and held that the rules, although laid on the table, could not be discussed. This seems to me an extraordinary and perfectly unintelligible position for him to take up. Under section 25 of the Ordinance No. 7 of 1902 the rules have to be approved by the Council; and I would ask any sensible person to say how they can be approved if they are not to be discussed, or how without such approval they can, in the face of the plain requirement of section 25,† be submitted to the Governor.

Then as regards the concession, about the middle of last year the Chairman was evidently occupied with the consideration of the subject of the concession to Messrs. Boustead Brothers, for on the 26th July, 1901, he wrote to the legal advisers of the Council in regard to it (see paragraph 2); and on the 11th September, 1901, he wrote to the Hon. the Colonial Secretary on behalf of the Council—but be it noted, without submitting the matter in any way to the Council—requesting that powers may be given to the Council to permit the laying down of electric mains, &c. The Colonial Sceretary replied on the 15th October, 1901.

On the 17th October, 1901, the letter was sent to our legal advisers so that they might draft the necessary clauses; and their reply of 7th November, 1901, was submitted to a "Committee" appointed on the 17th October, 1901, to consider the Chairman's memorandum with reference to the method of recovery of vehicles and animals taxes and assessment of properties, and to deal with such other proposals as may be brought up before the Committee by the Chairman.

The said Special Committee, on the 15th November, referred it to the Council's Electrical Adviser, who replied on the 2nd December, 1901, indicating the lines on which the clauses should be drafted; but the Chairman by his memorandum of 4th December, 1901, warned the Committee against any delay, as Government would pass the Ordinance without consulting Council. So the Committee adopted the draft of the legal advisers with the Chairman's suggestion to extend the powers to the granting of any concession for any purpose, and the Council passed the Committee's report on the 13th December, 1901. The Chairman on the 13th February, 1902, asked the Electrical Adviser to furnish him with draft rules under clause 8 of the Draft Ordinance. The Ordinance was passed on the 14th April, 1902, with the omission of the words underlined‡ in paragraph 12. Meantime the Electrical Adviser conferred with Messrs. Boustead Brothers, and forwarded certain rules. Although these rules as sent had been mutually agreed upon by the Electrical Adviser and Messrs. Boustead Brothers, yet there were meetings and correspondence with Messrs. Boustead Brothers, through the Chairman, and the rules were again modified without any reference to a Committee or Council. In fact, almost all the suggestions made by Messrs. Boustead Brothers were accepted by the Chairman and modifications were made.

In this connection the Chairman made no mention of the startling fact that Messrs. Boustead Brothers had already laid electric mains to the Galle Face Hotel, to the Chairman's residence in Kollupitiya, and to a house in Union Place, &c., without any reference to the Electrical Adviser and without the permission of Council.

Their application seems to have been subsequently granted in a lump, and so as to cover not only what they were to do after grant of the present application, but what they had, without permission or knowledge of Council, already done with audacious and astonishing irregularity. What is this but to reduce the Council to a mere nullity?

Note, too, the unfairness and hardship that will be entailed by the absence of a provision, such as is contained in the English Act, in regard to the price to be charged for the supply of electricity. Messrs. Bower & Webb, in their book on "The Law relating to Electric Lighting" page 53, say, "With regard to the prices chargeable by undertakers for the supply of electricity, the 6th section of the principal Act provides, as we have already noticed, that in any license, order, or special act, regulations and conditions may be inserted limiting (amongst other things) the prices payable to the undertakers; and with regard to the two former of these modes of concession, the Board of Trade requires (rule IV.) that any draft license or order shall contain the conditions of supply, including price, &c. A maximum limit, therefore, at any rate must be fixed by the undertakers applying. It

---

* It is significant that the alleged application of May 23, 1902, was printed and circulated only on November 20, 1902, *i.e.*, to say after I had pointed out in my dissent the absence of any application since June, 1901. What is more, it will be noticed that the Chairman's motion was evidently intended to give the impression (it certainly did so in effect) that the report of the Council's Electrical Adviser referred to the application about which the Chairman was speaking, whereas in reality that report referred to quite another application, viz., one "for permission to extend the underground mains for the supply of electricty in Colombo." The *result* was that one thing was apparently brought before the Council in the Chairman's motion and a totally different thing dealt with.

† Section 25 of Ordinance No. 7 of 1902: "The Chairman of any Municipal Council may, with the approval of the Council, from time to time make ..... rules and regulations ..... Such rules shall be submitted to the Governor in Executive Council for approval ....."

‡ The words underlined are given in italics in this publication.

must be carefully borne in mind that if the applicants obtain their concession, and begin by charging less than the maximum so fixed to any one customer within their area of supply, any other company or person within that area may demand a supply (if otherwise entitled to it under the 19th section of the Act of 1882) on the same scale or terms as to price as any other company or person within the district [section 20]."

Whereas in the arrangements we have made, or rather that have been made for us, though the highest price chargeable is 65 cents a unit, the concessionaires may evidently charge any sum lower, that is to say they can charge, *e.g.*, 50 cents to one and 40 cents to another, so long as they do not charge anything over 65 cents per unit, and some persons even now are charged 50 cents, as the Chairman knows, while the amount is fixed at 65 cents. This leaves a discretion in the hands of the concessionaires which is unfair and may be vexatious. If one man can get the supply on the payment of 50 cents, why should another have to pay either more or less? It is absolutely necessary that provision should be made for the uniformity of rate.

My reason for suggesting the passing of a special Ordinance when the draft of the present Ordinance No. 7 of 1902 was being discussed was that I felt sure that the salutary provisions—provisions in our circumstances more necessary than in England, such as are contained in section 6 of the English Lighting Act of 1882—would be adopted. How important these provisions are will be obvious from a perusal of section 6 of that Act, which I append. (See Annexure E.)

Lastly, I would point out how these irregular, unprecedented, and disastrous proceedings are clenched by the absence of the mention of any limitation of the time during which the concession is to be held good.

I am strongly of opinion that the draft rules and the concessions as they stand are one-sided, and their provisions seriously inadequate to what is demanded in the interest of the ratepayers and in the interest of the rights, the convenience, and the safety of the public. And I cannot but express surprise, as well as regret, that a step of this gravity should have been taken without the necessary and customary precaution of a reference to, and careful consideration by, a Special Committee of the Council.

(Signed) CHAS. PERERA.

Annexure A.

I MAY point out what seems to have hitherto entirely escaped observation, that the powers conferred and the duties imposed upon the grantee are strangely inconsistent with the provisions of the Ordinance No. 5 of 1873. For instance :—

(1) Section 5 of that Ordinance makes it compulsory on the grantee, at his own expense, to keep in good condition and repair the part of the road lying between the rails of the tramways, and so much of it as extends 18 inches beyond the rails on each side; but in clause 13 of the concessions no such provision is mentioned.

(2) The notice which by section 3, sub-section (1), of the Ordinance is to be given fourteen days at least before the commencement of the work, is by clause 12, sub-clause 1, of the concessions limited to seven days.

(3) Sub-section (3) of section 3 of the Ordinance makes it incumbent on the grantee to pay all reasonable expenses of the Council on account of superintendence of the breaking up of streets, but clause 12, sub-clause 12, of the concessions omits this provision.

(4) The distance mentioned in sub-section (4) of section 5 of the Ordinance does not agree with clause 12, sub-clause 3, of the concession.

(5) In sub-clause (4) of clause 12 of the concessions the time mentioned is six weeks, whereas sub-section (1) of section 4 of the Ordinance requires four weeks.

(6) Sub-section (3) of section 4 of the Ordinance is altogether omitted in the concessions.

CHAS. PERERA.

Annexure B.

The Electrical Adviser of the Municipal Council to the Chairman, Colombo Municipal Council.

No. 804. Gas Inspector's Office, September, 10, 1901.

Application of Messrs. Boustead Brothers for Permission to extend the Underground Mains for the Supply of Electricity in Colombo.

SIR,—I HAVE the honour to inform you that the system proposed by the undertakers is "The High Pressure Alternating Current-System," and the general method contemplated of carrying this out is a house-to-house system with transformers placed in private premises. Where, however, it is found advisable or necessary to serve any group of premises from one transformer or set of transformers, this method would be adopted, and in cases where it is impracticable to place such transformer within private premises it is proposed to provide accommodation for the same in an underground chamber placed at the side of the road: the construction of any such chambers to be governed by the Electricity Rules and Regulations, and the position to be approved by the Chairman of the Municipal Council.

2. I forward herewith plan of Colombo showing proposed mains marked in red.*

3. It is also proposed to lay an extra main on the direct current system in Chatham street, shown in blue on the plan.

4. I asked the undertakers if they were willing to agree to the Board of Trade Regulations for the tramways if the Council could see its way to grant the concession asked for by them. They replied that they were willing to do so. I have since gone through the Board of Trade Regulations with Mr. Garratt, and with several small alterations they have agreed to them and sent me a copy to submit to you. In a few days I will forward the copy to you with my report for the next Council Meeting's consideration. They stated also that they were willing to erect the metallic returns asked for in my report this morning, No. 803, paragraph 10 (*f*).

---

* Not reproduced.

5. I have therefore the honour to recommend that the request as defined in paragraph 1, which is to lay underground mains for the supply of current in Colombo under the streets marked on the plan submitted, viz., red for the proposed high tension system and blue for the direct current system, on the condition that the paragraphs 10 (*e*), (*f*), (*g*), and (*h*), be agreed to by the undertakers.

I am, &c.,
THOMAS COCKERILL.
Electrical Adviser to the Municipal Council.

The Secretary, Municipal Council, to the Electrical Adviser.

No. 1. Colombo, September 11, 1902.

Electric Mains.

SIR,—I AM directed to inquire whether by the words "the paragraphs 10 (*e*), (*f*), (*g*), and (*h*)" in the concluding portion of your letter under reference you mean paragraphs 10 (*e*), (*f*), (*g*), and (*h*), in your report No. 803 of the 10th instant.

Please send a reply by bearer.

I am, &c.,
R. R. DUNUWILLE,
Secretary.

Seen.
A. S. P.
11-9.

Yes, I mean the paragraphs in report 803.
T. C.
11-9-02.

Annexure C.

Messrs. Boustead Brothers to the Chairman, Municipal Council, Colombo.

Colombo, June 8, 1902.

Electric Supply Mains.

SIR,—WE have had some correspondence with the Superintendent of Works *re* the laying of a main in Chatham street, and we have received a letter from him, dated 31st May, on the subject, in which it is stated that the conditions laid down in the case of the main laid to Kochchikada in December last must be taken to apply to this and all further mains we may lay.

On referring to these conditions accompanying your letter to us of 5th December, we notice there are two conditions which we would ask you to kindly consider—

1. "The main is to be laid up a depth of 2 feet 6 inches beyond the road following the extreme side of the road."

Though this may have been a practicable condition in the particular case in question, we submit it is quite impracticable to carry it out in all cases. We would point out that at any practicable depth one might select one may encounter gas and water pipes, drains, &c., involving a deviation from a standard depth. Also we think a depth of 2 feet 6 inches will be found in most cases somewhat excessive, unless there are in any special case reasons for deviating from it. We would suggest that as a rule a depth of from 2 feet to 18 inches be adhered to as far as possible; and we would suggest that the position of the main be determined in each instance by the Superintendent of Works, since it may not always be either practicable or desirable to lay it on the extreme side of the road.

2. "It is clearly understood that should the Council deem it desirable to have the electric main removed, it is in no way liable to pay any compensation to the Company."

This condition was further referred to in your letter of December 15 last, in which you suggested that in addition to removing the main we should become responsible for the maintenance of the road for a period of three months.

We took this to mean that portion of the road under which the main had been laid.

These conditions were consented to in the case of the main to Kochchikada because we were obliged to do so (being under contract with Government to light the grain sheds), but we could not undertake to lay any further mains under this condition, which, we submit, is an impossible one, and we would ask you to abandon or modify it.

An electric main on the solid system when once laid in the ground cannot be removed and utilized in another place. If removed it is just so much waste, and practicably valueless material, though it may have cost a very large sum of money to lay down.

So far as we are able to ascertain, such a condition has never been imposed elsewhere; and it is obvious that no company would consent to sink capital in generating plant and electric supply mains for the public safety of electricity on such conditions.

We venture to suggest that this condition is in no way necessary, provided all mains are laid to the direction of the Superintendent of Works as to their depth and positions.

We contemplated extending the electric lighting mains in the residential portions of the town (and your permission has already been granted to an extension up Kollupitiya) in response to many requests and inquiries from residents. Owing to the scattered nature of the town, the long distances between houses and distance of them in most cases from the road, the capital expenditure on supplying mains would be very heavy in proportion to the amount of current which would be sold, and the financial results of these extensions is somewhat doubtful.

We are prepared to take those risks and the ordinary risks attending a business of this nature; but we could not add to them the risk introduced by this condition.

We are, &c.,
BOUSTEAD BROTHERS.

Annexure D.

MEETING to consider Lawyers' Letter of August 25, 1902, with remarks on Draft Rules for laying Electric Mains.

Present:—Mr. A. S. Pagden (Chairman) Mr. Cockerill (Electrical Adviser), and Messrs. Money and Garratt (on behalf of Boustead Brothers).

Considered the lawyers' remarks.

The decision of the meeting is noted by the Chairman against each remark of the lawyers in the margin. The verbal amendments made by the lawyers in the copy of the Draft Rules sent to them are also approved. As regards the words "the order," queried by the lawyers in rule B 8, the meeting agree to omit the words subject to the provisions of the order.

A. S. PAGDEN,
September 3, 1902. —— Chairman.

Mr. G. de Saram met me to-day, and we went over the decisions of yesterday's meeting. He agreed to all of them, except that he is of opinion that the penality in the last half of rule 60 should be reduced to Rs. 50 a day, and the word "further" introduced between "A" and "penalty" in line 8 of rule 60.

September 4, 1902. —— A. S. PAGDEN, Chairman.

Mr. Money having agreed to this amendment, print the rules attached to Lawyers' letter as revised.

—— A. S. PAGDEN,
September 5, 1902. Chairman.

Electric Regulations.

To Chairman.

Can the slight alterations noted in pencil on this page be made now? The words altered have crept in through some confusion in the rules as originally proposed and as amended.

S. W. DASSENAIKE,
September 9, 1903. —— Assistant Superintendent of Works.

It is due to a clerical error. Mr. Money is present, and agrees for Boustead Brothers to the above alterations. Let me have the copy being printed.

A. S. PAGDEN,
September 9, 1902. —— Chairman.

Annexure E.

C. (1882) The undertakers shall be subject to regulations and conditions as may be inserted in any license, order, or special act affecting their undertaking with regard to the following matters:—

(*a*) The limits within which and the conditions under which a supply of electricity is to be compulsory or permissive.

(*b*) The securing a regular and efficient supply of electricity.

(*c*) The securing the safety of the public from personal injury or from fire or otherwise.

(*d*) The limitation of the prices to be charged in respect of the supply of electricity.

(*e*) The authorizing inspection and inquiry from time to time by the Board of Trade and the local authority.

(*f*) The enforcement of the due performance of the duties of the undertakers in relation to the supply of electricity by the imposition of penalties or otherwise and the revocation of the license, order, or special act where the undertakers have in the opinion of the Board of Trade practically failed to carry the powers granted to them into effect within a reasonable time or discontinued the exercise of such powers; and

(*g*) Generally with regard to any other matters in connection with the undertaking.

Provided always that the Board of Trade may from time to time make such regulations as they may think expedient for securing the safety of the public from personal injury or from fire or otherwise, and may from time to time amend or repeal any regulations which may be contained in any such license, order, or special act in relation thereto; and any regulations so made amended by the Board of Trade shall from and after the date thereof have the like effect in every respect as though they had been originally inserted in the license, order, or special act authorizing undertaking, and every regulation so repealed shall from and after the date thereof be repealed accordingly, but such repeal shall not affect any liability or penalty incurred in respect thereof prior to the date of such repeal or any proceeding or remedy which might have been had in relation thereto.

In addition to the above, the acts and rules require—

1. Notice of application to be published by advertisement as the licensing authority may direct. [In the case of our rules it will be observed that there was no application to the Council—at least there was none that I am aware of, and really do not know how the rules came to be called for.]

2. Expiry of three months from date of first publication.

3. Holding of local inquiry by licensing authority to hear objections (if any) of persons interested, such as gas and water companies.

To the above the following observations of the commentators, Messrs. Bower & Webb, in pages 37 and 35, add even greater force:—

"The free resort invited to local inquiries on the application either of the parties seeking the license, or order, or of any opponent, and the encouragement given to all parties locally interested (by provisions for ample advertisement and otherwise) to make representations to the Board of Trade and proffer objections, or to propose the insertion of clauses or amendments in draft orders and licenses, leaves little cause for complaint either to the ratepayers or their representatives. [Board of Trade Rules, PI. and XII.]"

In the first place, as regards both companies and local authorities, the Board of Trade requires (rule VI.) the applicants to deposit with their memorial "a statement of the capital to be expended and employed in connection with the undertaking, and the mode in which such capital is to be provided;" and further, where application of a company incorporated under the Companies' Act, a copy of their memorandum and Articles of Association, from which, together with the above-mentioned statement, an opinion may be formed as to the relation in which their general financial position as defined by the former stands to the expenditure proposed in the latter. It may be observed here that, though limited as to the extent of naming of maximum in the first instance, and also to the extent of making no preferential charges, the companies are not expressly limited as to profits as the gas companies have been; since 1847, whose dividend in ordinary cases if above 10 per cent. must be devoted *quoad* a portion of the excess to the reduction of prices and for the benefit of the consumer.

ANNEXURE Y.

MEMORANDUM by the Members of the Standing Committee, with reference to the employment of the Superintendent of the Bridge-of-Boats after closing of Bridge. (See Minutes of 2nd August, 1895; see also paragraph 31 of Special Committee's Report on the Chairman's (Mr. Pennycuick's) Administration Report for 1894, adopted by the Municipal Council on 11th October, 1895.)

1. I AGREE with the Chairman's (Mr. Pennycuick's) note on the matter, both as to the propriety of appointing Mr. LaBrooy and as to the division of the work between him and the present Head Overseer Mathes. And my agreement is given all the more freely that the arrangement of the details of the scheme will furnish an opportunity—will indeed render necessary—a modification in our present system of management such as the circumstances loudly call for. I would suggest that both the head overseers should, like the Chief Municipal Inspector, be under the direct control of the Chairman, and not under that of the Superintendent of Works; and that both should be attached to the office upstairs. This course commends itself to me partly on considerations of general expediency and partly from an attentive study of what has passed between the Council and the Superintendent of Works in regard to the administration of his department. Neither the present conditions of the works, nor the character of the supervision the Superintendent has hitherto been able to give the staff employed under him, nor the avowed opinions of the Superintendent himself, would justify the Council in placing the new head overseer directly under his control. Before committing the Council to this appointment—the creation, in fact, of a new office—it is well to consider the working of the present system, the obvious defects under which it labours, and the strange disproportion between the outlay it has involved and the results it has shown. Upon such a review I am strongly of opinion that the alteration I suggest would effect not only an improvement in the efficiency of the work done, but also a material reduction in the cost of the doing.

2. The manner in which the scavenging work was done when that work was done departmentally and the bad condition of the roads, both at present and for some time past, have been the subject of much unfavourable comment. The Special Committee that sat on the Chairman's Administration Report for 1889 noted the fact that the expenditure on scavenging was never so high as since 1889, the year of the appointment of the present Superintendent; and that the work was "very imperfectly performed and not at all commensurate with its cost;" and that opinion was unanimously endorsed by the Council. This Committee was presided over by Captain Bayley, and among the members composing the meeting that adopted the report were Messrs. MacBride, Vanderstraaten, Ellis, Drieberg, Browne, Grinlinton, and Seneviratne; and the adoption of the report condemnatory of the manner in which the scavenging was performed was moved by Mr. Coomaraswamy, whose lengthened experience of Municipal work—he joined the Council in January, 1873—makes a comparison instituted by him of peculiar value. On the 30th September, 1890, Dr. Vanderstraaten, in agreeing with the dissatisfaction expressed by the Standing Committee on the Superintendent's working of his department, strongly animadverted on the very unsatisfactory way in which the scavenging and road works were done.

3. The Special Committee that sat in 1891 to consider the Chairman's Report of 1890 said in November, 1891 (see paragraph 24 of their report), "that the Superintendent's estimate for scavenging was Rs. 58,000," and that "the state of the streets and drains was not creditable to the department and was the subject of frequent public complaint." Since then the scavenging and the conservancy of latrines have been given on contract, and four years after they were so given over we find the cost reduced to Rs. 41,900, a reduction of over Rs. 16,000, notwithstanding the enhanced outlay rendered necessary by the use of the sweeping machines introduced in order to diminish the cost of watering the streets. And when the Superintendent attempted to suggest that the work was done better when it was done departmentally, the Chairman himself (Mr. Pennycuick) said on 18th June, 1894, "I very much doubt that the scavenging was done more efficiently or thoroughly when worked departmentally than under the contract system. In my opinion it is done with fair efficiency at present." I would add that if every Municipal Inspector* would make a rule of insisting on every detail of the work receiving thorough attention, the efficiency would be greater, and the result in every way more satisfactory. Even as it is, any faults discovered are pointed out with less reserve, and the directions with regard to the mending of them are carried out with far less cavil and wrangling and with infinitely greater despatch. And if we were further to adopt the system of three-year contracts in place of the present yearly contracts, it is almost certain there would be a saving on this item alone not merely of Rs. 16,000 but of a sum amounting to, if not exceeding, Rs. 20,000.

4. As regards road works, it is to be observed that in spite of the adoption of the MacBride system and the consolidation of the roads by steam-roller (which dispenses with the employment of large batches of coolies required for stamping and consolidating purposes under previous methods), and the saving in the cost of water, water carts, and transport of water effected by the use of Labugama water, there is no corresponding decrease in the expenditure, but on the contrary a considerable increase. Attention was prominently called to this by the Special Committee that sat in 1891 to consider the Chairman's Report for 1890. That Committee was presided over by Mr. Grinlinton, and

---

* See Standing Committee Minutes, June 10, 1890.

among the members were Captain Bayley, Messrs. Browne, Walter Pereira, Morgan, and myself, and its report was unanimously adopted by the Council. As it pointed out, the Superintendent's expenditure on the maintenance of roads exceeded that of his predecessors, the figures being Rs. 40,510 for 1888, Rs. 76,148 for 1889, and Rs. 61,220 for 1890. And we are further confronted with the startling* circumstance that the conservancy of the lake and the outlay connected therewith, which during the twenty-two years from 1866 to 1888 cost only Rs. 5,368·56, has from 1889 to 1894 cost over Rs. 59,000, that is to say, the cost for the last six years has been over ten times greater than the cost for the twenty-two years immediately preceding!

5. It is significant also that in respect of the St. Sebastian canal the expenditure from 1866 to 1888 was Rs. 25,172·40½, averaging Rs. 1,144·20 a year, whereas the expenditure from 1889 to 1894 has been Rs. 17,315·56, averaging Rs. 2,885·92 per year, which is more than double the average for the previous twenty-two years. And this when the income from the Lock-gate at the canal, which during the period from 1866 to 1888 had been Rs. 27,007·06, was during the latter period (1889–1894) reduced to Rs. 5,618·89, and the Council could ill-afford to spend so large a sum on this service.

6. A recital of the Council's dealings with the Superintendent of Works in the matter of applications for an increase of his staff, by additions similar to that now proposed, is extremely instructive, and almost compels the suggestion I make.

7. Only in August, 1894, when the Superintendent applied for assistance, the Standing Committee declared it was not satisfied that there was any need for assistance, and suggested that the public recreation grounds and other upkeep works should be remitted to the charge of the Chief Municipal Inspector.

8. In the file sent to me I find an application made so early as 27th July, 1889, in which the Superintendent wanted a man who would be able at any time to take the place of head overseer. Mr. Coomaraswamy was the first to sound a note of warning in regard to the allowing such an application. "No other department," he said in opposing it, on 23rd August, 1889, "in the Municipal Council has been so much strengthened as the Public Works Department: the present application really looks like the last straw." And the Standing Committee resolved on 6th September, 1889, that it did not see any necessity for the appointment. Again on 26th October, 1889, the Superintendent applied for a bookkeeper. The letter was on 12th December, 1889, referred to the Special Committee appointed to consider the desirability of increasing the staff of the Public Works Department, and it was resolved to employ a kookkeeper on a salary not exceeding Rs. 75 a month for three months, by which time it was expected the Committee would make their report.

9. Again on 9th January, 1892, the clerical staff was temporarily increased by the employment of an additional hand for one month. Even then Dr. Kynsey observed that he was not satisfied that any addition was required.

10. Then on 24th April, 1893, the Superintendent asks for two additional clerks. The Committee of 1889, which had sat to report on the application, deemed an addition unnecessary, but, in order to give the Superintendent the benefit of a perfectly independent consideration of his request, appointed an outsider, Mr. Charles Grenier, Accountant, to report on the matter.

11. Mr. Grenier's report fully confirmed the opinion of the Committee. In it he says: "The Superintendent of Works considered the keeping of the books in the form I have suggested unnecessary, and felt his position as head of the department questioned. Your Council will, I feel sure, agree with me that the members, representing the taxpayers, should be at liberty to see that the funds of the Corporation are fairly disbursed. One matter which the Superintendent of Works has urged on me is that the office staff of his department is not sufficient to cope with the work I am suggesting. I fail to see this." And in finally suggesting an arrangement of the work, he apportioned it as for two clerks, deeming that number quite sufficient. Since then the department has been strengthened by the addition of three extra hands.

12. With the suggestion made by Mr. Grenier the Superintendent disagreed, and in expressing his dissent says, "I may add that the system that has grown up under the pressure of the Standing Committee, when thoroughly started, is capable of connecting together the whole of the various stages, from the order for materials to the complete statement of a perfected estimate, in such a manner that the accounts can, if need be, be audited or examined and tested by members of the Council. In conclusion, I will only refer again to the entire absence of any reference to these absolutely necessary books, and I trust that the Council will not permit the result of so much hard work and thought upon the part of the Standing Committee being set aside for a scheme which is not clear from the report and may hereafter be found useless."

13. It is a strange proof of his appreciation that it is this very system, which he here deigns to commend, that the Superintendent has uniformly and persistently omitted to follow.

14. Among the many instances of such disregard are—

(*a* The exceeding of estimates and the altering of specifications without the sanction or knowledge of the Council, whereby the Council has been driven to the necessity of passing supplementary estimates and budgets, and has laid itself open to unmerited strictures from the Auditor-General.

See Standing Committee Minutes from 1890 to 1895, and Auditor-General's report for 1891, where he says:—"Of the remarks on the accounts, 275 are surcharges on the expenditure side, and represent a money value of Rs. 4,820·92. The grounds of surcharge are actual over-payments, due to erroneous computations or double payments, want of acquittances or supporting vouchers and receipts, want of authority of Council to incur the expenditure queried, and over-expenditure on votes. See also Auditor-General's report for 1892, where he says:—Of the remarks on the accounts 143 are surcharges on the expenditure side, and represent a money value of Rs. 29,774·36. The grounds of surcharge are actual over-payments, due to erroneous computations or double payments, want of acquittances or supporting vouchers and receipts, want of authority of Council to incur the expenditure queried, and over-expenditure on votes."

Also Auditor-General's report for 1893, where he says:—"The expenditure under Public Works forms, as might be expected, an important item in the Municipal budget; but so far as the Audit is aware, no specific regulations have been laid down within which the Public Works Executive Officer is to work in carrying out public works. It is true that estimates embodying certain specifications

* See statement of Mr. Ludovici for the years 1866-1885, and the statements of revenue and expenditure from 1886 to 1894.

are submitted to and aanctioned by the Council, and presumably this would seem to imply that the officer entrusted with the work provided for by the estimate is bound not only to keep the expenditure within the aggregate amount of the sanctioned estimate, but also to conform to the specification thereof. As a matter of fact, expenditure not apparently contemplated when the estimate was framed, or in excess of the specification, is not unfrequently incurred, and the replies invariably returned when such expenditure is objected to in the course of audit is either that the details of the estimate are only approximate, or that the excess expenditure should be charged to the item of contingencies in the estimate, which itself might perhaps be exceeded. The regularity of this procedure seems open to question. Circumstances might, no doubt, arise in the course of the execution of a work that may render a deviation from the specification of an estimate both necessary and justifiable; but if the sanction of an estimate by the Council has any significance at all, it is apparent that every deviation from an estimate should receive the approval of the authority which sanctioned the original estimate; and this can be conveniently done by submitting an amendment on the estimate for the sanction of Council, with full explanation of its necessity, to cover such deviation in every case where it might not be found possible to obtain the previous sanction of Council to the amendment.

As to this, see also Chairman's notes, where he says:—"The Superintendent has directions always to submit for approval an amended estimate, if he finds he cannot carry out the work on the original estimate. This order was given months ago by me."

And further, see Auditor-General's report for 1894, where he says:—"In previous reports the proper procedure to be adopted when any deviation is found necessary from the specification of an estimate has been pressed in vain upon the attention of the Council. Expenditure not contemplated and provided for on sanctioned estimates is still being incurred without previous sanction of Council. In no case has such expenditure been covered by an amendment of the specification of the original estimate."

As regards this, compare Chairman's note:—"I have repeatedly enjoined this on Superintendent."

(*b*) The delay in furnishing Progress reports—which the Superintendent is required by an order of the Standing Committee of 7th February, 1890 (which consisted of the Chairman, Messrs. MacBride, Alvis, and myself); to furnish on or before the 5th day of each month, and the non-furnishing of which monthly is a breach of the Ordinance—and the non-insertion in the Progress Reports of the amount voted, date of commencement of work, progress of work to date, expenditure to date, and probable date of completion of works in hand, and the non-furnishing of statements showing the quantities of metal and gravel used to date in roads referred to in the Progress Reports. (See a flagrant instance of this in regard to estimate No. 206 of 1894, where though the work was begun in May and completed in June, it does not appear in the Progress Report of May or June or July, and the work which had been estimated at Rs.1,270·57 cost only Rs. 557·97, and the explanation in regard to which called forth from the Chairman the scathing remark: "My attempt to get information, which I am entitled to ask for, and which indeed it is my duty to ask for, has so far resulted in nothing but ambiguous replies," while the Standing Committee rejected the Superintendent's explanation as unsatisfactory).

See also Standing Committee Minutes, 15th December 1893, 29th May, 1894, 26th October, 1894, and 2nd November, 1894.

(*c*) "The irritating delays" in answering the "simplest questions" complained of by Mr. Pennycuick.

(*d*) The failure to endorse and initial check-rolls, as required by resolution of 26th July, 1889, and to follow the practice of the Public Works Department in respect to the keeping of check-rolls and certificates thereto, and to see that the numbers of the commutation receipts held by the labourers are in all check-rolls entered opposite their respective names, and duly to inspect each morning the works in hand and to note in the check-rolls any irregularities discovered.

See the check-rolls and the Minutes of the Standing Committee of 9th July, 1890, 4th March, 1892, and 12th March, 1892.

See also the resolution of the Council of 20th August, 1873, that "it is the duty of the Superintendent to devote each morning to the inspection of works in hand. He should on all such occasions examine the check-rolls to satisfy himself that the men are present, and thus render it impossible for the overseers to charge for labour not performed. He should note in the check-rolls any irregularity that he finds. He should so arrange his visits that every work should be inspected twice at least in the week, taking in on each occasion all the works within a given district or ward."

See Auditor-General's Report for 1891, where he says:—"Payments made to overseers and labourers employed on public works undertaken by the Municipality were at first supported by the original check-rolls kept by the overseers, duly acquittanced by the payees. These check-rolls were in many cases very unsatisfactorily kept, the marks indicating daily employment of labour being made in pencil with frequent erasures and corrections. The importance of insisting on check-rolls being daily and properly filled in with ink by the overseers can hardly be overstated."

See Auditor-General's report for 1892, where he says:—"Too much stress cannot be laid upon the importance of the supervising officers inspecting, as often as circumstances will permit, the check-rolls and seeing that they are daily and duly filled in at fixed hours. Pencil entries and erasures should be discontinued as much as possible. When labour is employed on Sunday on works of necessity or emergency a certificate from the Superintendent that Sunday labour was unavoidable should be appended."

See Auditor-General's report for 1893, where he says:—"The audit has not unfrequently had occasion to remark on the unsatisfactory state of the check-rolls rendered with the accounts. It is observed that in many cases men who have been originally marked as absent have the mark (cypher) indicating absence altered into a cross to indicate presence, while there is nothing on the face of the document to show that the alterations are *bonâ fide*. Often also the alterations are nearly, if not almost, illegible, and the distribution incorrectly worked out; and from the numbers of queries that have to be raised, it would seem doubtful whether they are subjected to any examination before payment is made."

On this compare Chairman's note:—"I have recently given stringent orders that the check-rolls are to be kept in ink."

See Auditor-General's report for 1893, where he says: "It is desirable that overseers should be required to keep their check-rolls rolled up in a tin case, and to fill them up with greater care. It is important also that the check-rolls should be inspected and signed by the Superintendent of Works whenever visiting a working party, and the number of men at work verified with the entries therein. It is possible that this is now done, but there is nothing on the check-rolls to indicate it. It is suggested that a certificate somewhat to the following effect might with advantage be recorded on the check-rolls, as is done in the Public Works Department under Government, viz.: "I hereby declare on honour that on the following dates (————) I checked the number of men employed under overseer ———— and found the number at work to correspond with the entries in the columns bearing the above dates.'"

See Auditor-General's report for 1894, where he says: "Some of the check-rolls, notably those of one Amala Marikar, appear to be originally filled in in pencil, and the entries inked over at some subsequent date. The practice is irregular. If check-rolls are to serve the purpose they are intended to serve, it should not be possible for an overseer to alter original entries without such alterations being manifest on the face of them.

"In fact, it is in the highest degree undesirable that facilities should be afforded for alteration of check-rolls. The precaution of check-rolls being verified by the Superintendent of Works on his visits to working parties is an important check, as has been observed in previous reports; but the check-rolls bear no signature of the Superintendent as evidence that this is done."

As regards this, compare Chairman's note: "This is, I think, the overseer with whose check-roll the Chief Municipal Inspector found fault recently, a stricture which was bitterly resented by the Superintendent."

(*e*) The failure to furnish the monthly and quarterly returns of work done under certain estimates (see Standing Committee Minutes, 28th October, 1890, 15th November, 1890, 2nd November, 1894, and 22nd March, 1895), and the imperfections which render necessary the constant remission for amendment even of those that are sent (see Standing Committee Minutes, 17th June, 1890, and post).

(*f*) The omission duly to keep and submit a diary. (See resolution of Council of 10th August, 1888.)

(*g*) The omission when furnishing his accounts at the end of each month to give a return of all tools lost and paid for.

(*h*) The entire want of system in the keeping of accounts of stores generally.

See Minutes of Standing Committee, 2nd November, 1894.

Mr. Grenier says: "The system of account keeping in the Stores Department, if any exsists, is to say the least of it scandalous. There appears to have been no check in regard to receipts and deliveries for several years past."

The Consulting Engineer of the day (Mr. Ormsby) writes of it, "I quite endorse Mr. Grenier's remarks on the store accounts," while the Auditor-General says: "It should be here observed that replies to the remarks raised on the accounts have been received only up to August, 1891, and that the store returns and completion report for works undertaken in the year have not yet reached the Audit Office. Consequently the audit of the year cannot properly be said to be closed. See Auditor-General's report for 1891."

See also Auditor-General's report for 1891, where he says: "The Audit does not at present possess the means of instituting a check over the receipt and issue of stores from the Municipal stores, and a return has therefore been called for from January, 1892, giving such particulars as will enable the Audit to satisfy itself that all stores paid for are duly accounted for. It is necessary also that the Audit should be in a position to know whether or not all stores drawn upon any estimate have been used up in the work, and in the case of stores unused that they are again brought on in the general return of surplus stores, as is done in the Department of Public Works. The Superintendent of Works considers that a compliance with requirement of Audit will entail much clerical labour, and the matter is therefore deferred for discussion with the Chairman."

Also Auditor-General's report for 1892, where he says: "The suggestion made in the report for the year 1891 in regard to a return of surplus stores being kept, as is done in the Public Works Department under Government, has not yet been adopted. This is a necessary return if the Audit is to exercise any sort of check that all stores drawn on an estimate have been used up in the work, and that any surplus is accounted for. It is admitted that this return will entail some clerical labour, and it is for the Council to determine whether its importance will justify the expenditure."

Also Auditor-General's report for 1893, where he says: "The suggestions made in the reports of previous years in regard to a return of surplus stores have not yet been adopted. In the absence of such a return the Audit has not the means of reasonably satisfying itself that all stores drawn on an estimate have been actually used up in the work, and that any surplus or unused stores are otherwise accounted for."

As regards this, compare Chairman's note: "I have repeatedly called the attention of the Superintendent of Works to this point, and did so again recently."

See Auditor-General's report for 1894, where he says: "Contracts have been entered into for the supply of tools, materials, &c., but it is observed that purchases are nevertheless very largely made from Messrs. Walker, Sons & Company."

As regards this, compare Chairman's note:—"This requires careful looking after."

(*i*) And the omission to answer promptly and effectually the queries of the Auditor-General, in consequence of which I learn that the accounts since 1891 have not yet been closed.

See Auditor-General's report for 1891, where he says:—"A statement is also appended showing the dates on which the accounts of each month reach the Audit, the dates on which remarks were transmitted to the Chairman, and the dates on which they were replied to. It is important that no avoidable delay should be allowed to occur in future in replying to remarks of Audit, if the requirement of the 119th section of the Ordinance is to be punctually complied with."

See Auditor-General's report for 1892, where he says:—"A matter of some inconvenience to Audit is the delay in furnishing replies to remarks raised. It is very necessary that steps should be taken to avoid this in the future. It is important that no avoidable delay should be allowed to occur in replying to remarks of Audit, if the requirement of the 119th section of the Ordinance is to be punctually complied with, as with replies outstanding the Audit of the year cannot properly be said to be closed."

See Auditor-General's report for 1893, where he says: "The completion of the audit within the time prescribed by law is retarded by the delay which now takes place in replying to remarks raised in the course of examination of the accounts."

As regards this, compare Chairman's note: "Due entirely to delay in the office of Superintendent of Works."

See Auditor-General's report for 1893, where he says: "Apart from the importance of early attention being given to the remarks of Audit, there is no apparent reason why they should not be disposed of with greater expedition than is now the case. A period of three weeks at the outside should be more than ample for the purpose. It would be desirable also that the transmission to Audit of the accounts of a month should not be delayed beyond three weeks after the close of a month, a somewhat longer period, if necessary, being allowed for the accounts of December.

"The delay in disposing of remarks raised in Audit affects chiefly the Public Works Branch. Making every allowance, it should be possible, with more determined effort in this direction, to deal with the remarks of Audit with greater promptitude than has been the case. As the expenditure is local, and is under the control of one officer, a period of three weeks would seem ample for the purpose."

These examples will be sufficient for my present purpose. I have by no means exhausted the list of irregularities which lie open to the most casual inspection.

It is manifest that these defaults and deficiencies in the carrying out of directions given by the Standing Committee, of which the present Director of Public Works was a member, and the necessity for many of which the Director himself had pointed out, constantly repeated as they have been and extending over so large a range, are not calculated to raise a favourable estimate either of the Superintendent's administrative capacity or of his regard for the orders of the Council.

15. It is worthy of note also that though the present Superintendent found so much difficulty, notwithstanding the large staff at his disposal, no such difficulty was experienced during the time of his predecessors, although there was then no bookkeeper, or storekeeper, or assistant storekeeper, or draughtsman, or audit clerk, and although the scavenging work was then done departmentally. About the same amount of work was done then, and done more efficiently, with a much smaller staff of assistants. However, on 26th May, 1893, Rs. 50 per month was temporarily allowed, and in making the allowance the Chairman found it necessary to undertake to ascertain and re-apportion the work of the Superintendent's staff.

16. On 8th September, 1893, the Superintendent writes that he has engaged a clerk at Rs. 30, and seuggsts that the second clerk should receive an increase of Rs. 10, and that Rs. 10 should be allowed to accumulate till the close of the year for the employment then of an additional clerk.

17. On 11th February, 1893, the Superintendent had applied for a Clerk of Works in order to relieve him of the work of supervision, and was allowed a man for six months. On 17th October, 1893, he reports that that employment was a failure, and in the same letter applies for an office assistant.

18. This request the Council answered by appointing a supervisor (called at present Chief Municipal Inspector), but he was to be under the direct orders of the Chairman.

19. On 2nd May, 1894, the Superintendent again applied for assistance. The Chairman remarked that the Superintendent was "needlessly exaggerating his burdens," and suggested that if any addition was necessary (which he doubted), a young man trained in the Public Works Department would be sufficient. The Committee, however, resolved on 29th May, 1894, that they saw no sufficient reason for recommending an assistant, but intimated that they would reconsider the application when the trunk roads should be taken charge of.

20. Accordingly, on 15th June, 1894, and on 30th June, 1894, the Superintendent repeats his application. And on 4th August, 1894, he informs the Chairman that he has secured a man who will take up the post on a salary of Rs. 3,000 the first year, and Rs. 4,000 per year thereafter. On the papers being circulated with the Chairman's remarks, I suggested what I now urge, and what I have long maintained, and what both my own observation and the independent examination of competent persons specially appointed for the purpose have placed beyond all question. My opinion was that there was no necessity to create the office; that the staff of the Superintendent had from time to time been increased, but with no increase in efficiency; and that the upkeep of the roads had cost more since the appointment of the present Superintendent. I referred to some remarkable passages in the report made by the officer sent by the Audit Office to examine the working of the Department, and I suggested that the upkeep of the roads should be taken from the Superintendent and given in charge of the Chief Municipal Inspector—a suggestion quite in accordance with and almost foreshadowed in the remarks of the Director of Public Works on the Chairman's Administration Report for 1892.

21. Of the other members, Dr. Kynsey said he had carefully read the papers and was far from convinced that an assistant of any kind was required; Mr. Seneviratne said, "I see no need for an assistant with scientific knowledge. Relief may be given as suggested by Mr. Perera." Messrs. Dias and Fernando were of the same opinion.

22. Accordingly, on 24th August, 1894, the Committee agreed to give a portion of the upkeep works to the Chief Municipal Inspector, so relieving the Superintendent. Then the Superintendent writes again on 30th October, 1894, on the subject of an assistant, and says: To limit the appointment to young Ceylonese and to place my reputation and position at the mercy of an inexperienced youth, would be to cost more than is reasonable," and "unless I can have a man upon whose experience and caution I can wholly rely, I would prefer to struggle on alone." On this letter being referred to Committee, Dr. Kynsey remarked again that he saw no reason for any assistant being given. The other members and myself were of the same opinion, and the Committee resolved that the Superintendent should be relieved of the upkeep on public grounds.

23. On 13th March, 1895, the Superintendent writes: "The Chief Municipal Inspector, no matter how useful to the Chairman, in no way aids me in my work. He has not done so far, nor do I see how he can." Upon this the Chairman, after remarking that the Superintendent's statement is "hardly justified by facts," points out that the Superintendent does derive most material assistance in that the appointment of the Chief Municipal Inspector has relieved him of all scavenging work.

24. Yet with incredible inconsistency the Superintendent writes on 20th March, 1895, that he can take up the scavenging work also, and even the supervision of the fire stations. And the Chairman, as might be expected, points out how wholly and flatly the Superintendent's note is contradictory of the assertions so frequently made by him before.

25. It is at this stage that the Council is asked to create another office, and it is well that before doing so we should pause and consider our position in the light of past experience. The foregoing review puts beyond doubt two matters: (1) that the Superintendent lacks administrative ability, such as would enable him to make efficient use of the new officer; (2) that the Superintendent feels that he has already more than enough to engage his attention.

26. Each of these positions furnishes the strongest possible ground for suggesting that it would be highly inexpedient and inadvisable to place the new Head Overseer under the control of the Superintendent.

27. With regard to the first point, I would add to the information furnished by the letters I have already quoted the observations of the officer sent in November, 1893, by the Auditor-General to report on the whole working of the department. His report is dated 6th December, 1893, and it says: "My own opinion is that if every clerk adopted a proper system in doing his duties, and if he and his work were strictly and carefully supervised, there need be no complaints of having too much to do, or that any portion of work was unreasonably behind." The deficiency, he says, is "attributable to the lack of strict and careful supervision."

28. Speaking of the Superintendent, he says: "From a conversation with him, when I pointed out a thing or two that I thought useful and right, I gathered that he is rather prejudiced about adopting any suggestion from Audit or other sources, and does not like any interference in his method of business, which he thinks is best. The arrears in replies to remarks from Audit is very largely due to this."

29. These observations fully corroborate what the Chairman, Mr. Pennycuick, had noted on 25th April, 1893, on the Superintendent's letter of 24th April, on the subject of delays of works: "There is no doubt that, whatever the cause may be, the delays in the Superintendent's office are most irritating. I have to wait myself for days for answers to the simplest questions. I have repeatedly asked the Superintendent (but in vain) to look through his papers daily, and at all events deal with those which can be answered or settled off-hand, but he prefers his own plan of letting everything wait until he has a day of leisure. The delay in audit is a source of continual complaint. People who apply to re-thatch houses or to rebuild are constantly complaining to me that they get no answer within reasonable time. I believe that the Superintendent does want more clerical aid; at the same time I must state that he himself is not nearly so good at his office as at his outdoor work. There appears to me to be a want of system; nor do I believe that if the Superintendent had any number of clerks he would have got proper work out of them."

30. Neither the Secretary of State when sanctioning the Ordinance,* nor the officers employed for he special purpose of reporting on the condition of the department, could have contemplated such an enormous expenditure as that which has been bestowed—and bestowed all in vain—on the department in charge of the Superintendent of Works. And the Chairman, Mr. Pennycuick, and the members of the Standing Committee were of opinion that an addition to his staff would not put matters on any better footing. An increase of his staff, therefore, is manifestly out of the question.

31. Moreover, the Superintendent himself feels that the work assigned to him is, and long has been, more than he is equal to. In fact, his inability to cope with his work has been his constant theme of complaint. On the 2nd May, 1894, he writes: "As I am now situated, I can only expect discredit. If I hesitate to expend the money, knowing that I cannot properly attend to so much work, I am thought dilatory, whilst if I press on the works I lay myself open to charges of neglect and want of proper supervision." Again, on the 4th May, 1894, he says: "Under the present arrangements I do not see my way to be prepared with estimates and plans for the many important works" which "demand considerable investigation and preparation of plans before estimates can be framed." On the 8th August of the same year he renews the confession in the following words: "And now that the trunk roads are added, I am unable to give that attention to my work that it demands. Roads are repaired without my being able to see them, and works go on without my supervision. I am at the mercy of overseers and contractors."

32. Indeed, as if almost to anticipate me in the suggestion I am making, the Superintendent himself writes in letter of 2nd May, 1894, already referred to: "In fact, if the Council appoints a Superintendent of Roads, he will have as much and more to do as my predecessors, whilst there will remain to me the expenditure of Rs. 100,000 per annum in new works, and also general correspondence and conservancy." And in a previous paragraph of the same letter: "It is therefore not only necessary in the interests of the Council that the expenditure of these large sums should be more thoroughly supervised, but it is physically impossible for me to continue to attempt so much." And again in August, 1894, he writes: "The experience of last year pointed to the necessity for an assistant, and now that the trunk roads are added I am unable to give that attention to my work it demands." The true remedy for the evils he complains of is clearly to afford him relief by lessening the work for which he is responsible, rather than by adding to the number of officers he already finds it impossible properly to supervise. The adoption of my suggestion will relieve him of nearly all clerical work and of a large part of work of which no technical skill is required, and yet leave him enough to attend to in the way of professional duties, as he calls them. And with the relief thus given to the Superintendent, there will be the saving of at least Rs. 30,000 in the cost of upkeep of roads and works, in addition to the saving of over Rs. 16,000 already effected by the transference of the scavenging works—not to speak of the saving and increased efficiency that would be the certain result of the stricter supervision the Superintendent would be enabled to exercise in regard to new works and works of construction. For, although with unsuspecting inconsistency he recently expressed himself willing to resume charge of the scavenging, and even to take charge, "by way of recreation," of the fire stations, and though the Chairman, Mr. Pennycuick, thought "that he exaggerated his burdens," still in the face of these complaints, so strongly expressed and so frequently reiterated, we, as immediate guardians of the public interests, cannot possibly deem it expedient or safe to lay another burden upon shoulders already overtasked.

33. Already there would seem to exist the alarming anomaly of the Superintendent certifying that materials drawn and issued on sanctioned estimates have been actually and *bonâ fide* used on such estimates, although he admits that the supervision he is able to exercise is inadequate (see certificate appended to completed estimates). Should this and other dangerous practices be allowed to continue, still more if, as would inevitably happen under the present management, they were,

* See paragraph 10 of Despatch of 30th May, 1887, from the Secretary of State.

suffered to extend, the result would be the opening of a wide door for wastefulness and fraud in respect of the taxpayers' money, a result which I am sure we, as their representatives, must feel ourselves bound to employ every means of preventing.

34. Seeing then that the Superintendent is already overburdened and finds himself unable, for want of time, to attend to the directions of the Standing Committee and Council; that the cost of the works has risen far beyond what it used to be; that, notwithstanding this increased cost, the work has been done unsatisfactorily;* that the delay in disposing of the Auditor-General's queries has actually resulted in the accounts for the last four years not being yet closed; that the assistance given to the Superintendent from time to time on a most liberal scale has been found to have effected no appreciable improvement in his working of the department, roads being still repaired without his knowledge and works going on without his supervision; that no engineering skill is required in dealing with the upkeep works; that the Superintendent apprehends danger to his reputation and position from the employment of persons not after his own heart; that the Chairman, Standing Committee, and Council appear to be agreed that the best mode of affording him relief is not so much by adding to his staff as by diminishing the range of his supervision; and that this form of relief would not only lead to the end immediately aimed at, but also effect a saving of so large an amount as over Rs. 30,000 of the Municipal funds, in addition to the saving that would be effected by the more vigilant supervision it would enable the Superintendent to exercise;—on these considerations I would suggest that the upkeep of roads and buildings, the conservancy of the lake and sewers, and the dredging of the lake and St. Sebastian's canal be given to the two Head Overseers; that they divide the work between them, being required to keep and regularly submit to the Standing Committee and Council a diary such as the Superintendent is required to keep, and that for the present they follow, in regard to the work thus apportioned them, the directions of the Council, Standing Committee, or Chairman, in the same manner as the Superintendent does, or, if he follows the directions given him, should do. An arrangement which the present situation of affairs imperatively demands, which, while conducive to despatch and efficiency in the performance of such works—and these are the most considerable and the most neglected—as require no special skill, will leave the Superintendent sufficient time for attention to his more appropriate duties; and which would at the same time permit of our exercising some economy by discontinuing the present extra clerk and detaching the bookkeeper and either the head clerk or the second clerk for work upstairs.

June 27, 1895. CHAS. PERERA.

P.S.—A word in explanation of the length to which this memorandum has run. I can only ascribe it to my desire to adduce authority for every statement I have made, and give references that will confirm and illustrate every position I have taken up. The interest and importance of the subject will, I feel sure, plead my excuse for the length at which I have treated it. To my mind, the gravity of our present situation cannot be exaggerated. It is no light thing to have the Auditor-General remark that suggestions reasonable and proper have been pressed in vain upon the attention of Council. What if the next step be that, deeming the Council incompetent to enforce its own rules, the Government take that duty upon itself? Nor is this an imaginary or ill-grounded apprehension. It will be remembered that in the draft of the present Municipal Ordinance it was proposed to give Government the power of rejecting or modifying the Budget passed by the Council. Another Ordinance is in contemplation, and can it be said that the present state of the Department of the Superintendent of Works may not furnish a reasonable plea for some curtailment of the Council's powers in relation to it? As one who has been a member of the Council for the last eleven years, and who has served in almost every one of its Committees, I cannot be a passive witness to the Council suffering in prestige or in power for the faults and failures of one of its officers. And I should be recreant alike to the duty I owe the Council and the trust reposed in me by my constituents, if I forbore to state my honest conviction that we should not let slip this opportunity of effecting a much-needed reform.

It is in this spirit that the foregoing remarks have been recorded; and in this spirit I trust they will be received and considered.

C. P.

I HAVE read Mr. C. Perera's memorandum *re* the Public Works Department, Municipal Council, with much interest. Having served in the Standing Committee for nearly five years, and having had ample opportunities of seeing how the work of the Public Works Department is carried on, I feel sure that if the suggestions made by Mr. C. Perera be adopted, both the Chairman and the Standing Committee will be saved much trouble and worry. That the Superintendent of Works is a capable officer there is no doubt, but he mars his usefulness by taking too much upon his shoulders. It is very manifest that he has neither the time nor the opportunity to carry out, without protracted delay, repairs to roads, improvements to existing works, or new works sanctioned by the Council. Works requiring technical knowledge, such as the construction of new roads, public buildings, sewers, and other works of this description should, of course, be carried out under his direction and supervision; but he should be only too glad to be relieved of works which do not come in this category. Such works as the metalling of roads, the conservancy and dredging of the lake, the care of public recreation grounds, &c., would, I think, with advantage be transferred from his department to the Chief Inspector and experienced overseers, who should be under the direct control of the Chairman, so that the Superintendent of Works might have ample time and free scope to attend only to all works requiring technical knowledge. The condition of many important thoroughfares and lanes in different parts of the town does not reflect very much credit on the Municipal Council, and that they should be allowed to remain so for a long time is most disgraceful. Under these circumstances I should be very loth to vote for any additional help to Mr. Skelton; but I am most strongly in favour of division of labour as suggested by Mr. C. Perera, whose remarks should be printed and circulated among the members of the Municipal Council, as he seems to have devoted much time and attention to the subject. (*Vide* also my remarks of 24th August, 1894, on this subject.)

St. Sebastian, June 27, 1895. CHAS. P. DIAS.

---

* As fully appears from the present condition of the roads and from Chairman's note in Superintendent's letter No. 282 of 15th June, 1894.

I HAVE carefully perused Mr. C. Perera's report on the application for assistance by the Superintendent of Works and the employment of the Superintendent of the Bridge-of-Boats.

I am thankful to Mr. Perera for giving us so much information on this subject.

I remember that in 1889-1890 the Superintendent made a similar application and we then refused to give him more clerical assistance.

I am of opinion that the Superintendent of Works should be relieved of the upkeep of roads and buildings, recreation grounds, conservancy of lake and sewers, and dredging work. These could be well done, and better attended to, by the Head Overseers suggested to be appointed.

I never knew the roads to be in such a disgraceful state as they have been for months past. I avoid Dean's road, and so does the Inspector-General of Police and others that I know. Depressions in roads, caused by cross pipes, are most injurious to the health of ladies, and ruts are equally bad. These depressions, which are not filled in owing to careless supervision by the Department of Works, must cause much harm by sudden shocks. I have experienced discomfort myself. The road opposite my house is a drain, the water takes a zig-zag course through the road, lengthwise, because surface drains are not cut on the sides.

I recommend Mr. Perera's report to be printed and circulated.

J. L. VANDERSTRAATEN, M.D.,
Member of Standing Committee.

Colombo, June 26, 1895.

I HAVE had the advantage of reading Mr. Chas. Perera's elaborate memorandum, and the suggestions therein contained meet with my approval. Having myself served continuously in the Standing Committee during the last four years, I am aware of the correctness of the statements in *re* the working of the Department of Public Works, and am of opinion that in giving relief to Mr. Skelton it should be in the direction of relieving him of merely mechanical and supervising work. I would suggest that Mr. Perera's memorandum be printed and circulated among members.

June 26, 1895. CHAS. M. FERNANDO.

Mr. Perera's suggestions are worthy of consideration. I should like to see his memorandum printed.

A. S.

26-6-95.

ANNEXURE X.

DISSENT ON RESOLUTION NO. 4 OF JULY 11, 1902.

I AM obliged to dissent from resolution No. 4 of 11th July, 1902. I am unable to agree with the principles laid down in Mr. Cooper's letter No. 1,088 of 19th-21st April last. (See Annexure A.)

Although I do not think it necessary to have a permanent staff of artificers and coolies in a place like Colombo, where not only are such men always available, but even trustworthy contractors who have also command of such skilled labour, yet I would not altogether object to a permanent minimum staff of such artificers and coolies as may be necessary for the prompt and efficient execution of immediate repairs being practically continuously employed.

But I certainly do not agree with the Director of Public Works when he says, "There are certain classes of work which require specially trained men, such as road maintenance and drainage works; the ordinary contractor has probably not at his command men specially trained in such work." The contractor can get the same class of overseers and skilled labour as the Superintendent of Works can procure for those purposes in Colombo. And if such works are frequently given on contract, there will arise a class of men who will find it worth their while to engage in them, and will study the particular kind of work with a view of doing it on contract. And it will be to their advantage to do such work satisfactorily in order to induce the Council to give such work more and more on contract.

It is also noteworthy that the Public Works Commission, who made their report to Government in July, 1901, recommend the adoption of work on contract "in connection with the upkeep of roads, such as breaking metal, clearing jungle, side drains, spreading and consolidation of metal," and that the Government has accepted that recommendation. (See Annexure B.)

I have nothing to remark on the 6th paragraph of Mr. Cooper's letter.

But I disagree again with the remarks in the 7th paragraph of Mr. Cooper's letter, viz.: "In cases of small works of the above nature, say estimated cost not exceeding Rs. 1,000, it is very doubtful if the work involved in the preparation of detail drawings, specifications, &c., is worth any apparent advantage to be gained by public tender."

I cannot understand why, when even where such works are done departmentally, detail drawings, specifications, &c., are considered necessary. There is no apparent advantage to be got by contracts: for the tenderers in such cases will be men of smaller means than those who can give security for a work of Rs. 20,000 or Rs. 30,000, and will be satisfied with a smaller profit. We know also that when a large contractor takes a contract it is usual with him to give large portions of it, or almost the whole work, to sub-contractors. And that is the case where big firms like Messrs. Walker, Sons and Company, Commercial Company, and others take work on contract. Besides, we know as a fact that some of the small upkeep works which are now given on contract have been for several years past, and are now being, done much cheaper than they were done by the Municipal Council departmentally—although in some cases the work itself has considerably increased. That it is expedient and advisable to give such works on contract is not my opinion only; it was the well-considered and deliberate opinion of the Public Works Commission of 1880. (See Annexure C.)

It was also the opinion arrived at by the Public Works Commission in their report of July, 1901. (See Annexure B.) Considering that the Superintendent always complains of being overburdened

with office work that leaves him no time for detailed supervision, I should think that he ought to be the first person to welcome a reversion to the contract system, if he is confident he can work up to the plans and specifications in the estimates he frames or passes as correct.

In fine, the superiority of the contract system seems to me to be evident, if regard be had to the following considerations :—

(1) The practicability of gradually reducing an expensive staff and finally organizing them and limiting the establishments to the actual requirements of the Municipality.
(2) The transfer of responsibility connected with the work from irresponsible officers of the Council to contractors legally and firmly bound to discharge such responsibility.
(3) The saving of frequent references to the Council in the shape of additional and supplementary votes.
(4) The utilizing of the services of a high grade of officers in the work of inspection and approval of works done by contract, rather than the absorption of their time in departmental work which the present system necessarily entails.
(5) The prevention of frauds and of reckless and extravagent expenditure by irresponsible officers.
(6) The arousing of public interest in Municipal works, thereby directly popularizing Municipal institutions and calling forth a wholesome criticism of the expenditure for each kind of work incurred by the Council on the City's behalf.
(7) There is no reliable record at present of the quality and quantity of materials received, used, and of balances left. There have been instances where most inferior materials were supplied, and material less in quantity than was paid for was received, and of thefts of the property of the Municipal Council. It is a curious circumstance that although large amounts of materials are dealt with from time to time by the employés of this department, the balances and surplus materials on estimates at the end of the year are invariably insignificant—an experience never elsewhere to be ordinarily met with.

Estimates sometimes are carelessly prepared, and if no additional or supplementary estimate can be applied for, then means are found to supply the deficiency by a transfer from one estimate to another, or to alter the specifications of the estimates without warrant from Council. (See Annexure F.)

The system of getting Municipal works done by contract has been favourably recommended by the Commission which considered the public works of the Government in 1880 and 1901, which comprised gentlemen of varied experience and undoubted qualifications to pronounce an opinion on a matter like this. See also in this connection Mr. Ellis's opinion and that of the Municipal Commission of 1886. (See Annexures B, C, D, and E.)

The great delay that often occurs in starting work even after votes are passed—some of them not being undertaken for years after a vote is passed by Council—often necessitating the re-voting year after year. (See Annexure F.)

There is no proper system of accounts kept, and there is a want of proper administration of this department of the Municipal Council. (See Annexure F.)

Whatever may be said of giving work on contract by some engineers, the general rule among private individuals, companies, and other bodies with less advantages than the Municipal Council or Government have in regard to obtaining wholesale contract prices for materials and tools, is to give their work, small or large, on contract, and the cost to them is almost always much less than the expenditure entailed by Council or Government who do the works with a staff of their own.

CHAS. PERERA.

Annexure A.

From the Acting Superintendent of Works, Municipal Council, to the Chairman, Municipal Council, Colombo.

Colombo, April 16, 1902.

No. 461.

Drainage, Layard's Broadway.

SIR,—I HAVE the honour to forward herewith a specification and form of tender and notice for the above work in accordance with Standing Committee Minutes of 17th January 1902, paragraph 5.

I must, however, mention that the works at present in hand are insufficient to keep the departmental staff working beyond the end of the current month. That staff has been got together and trained at the cost of much labour and trouble, and is now well acquainted with drainage work such as this, which requires special knowledge. It has been reduced very considerably after the completion of the Sea street improvement, and it is, I may say, absolutely necessary that the remainder should not be disbanded, but be kept in constant work so far as is possible, as it is to it I must look for the execution of any works such as are of an urgent nature or which are not tendered for. As mentioned above, the staff has been reduced, I may say by one-half, so that you will see it is undesirable to reduce it further, and that it is not of too great a strength.

I had hoped that the work of Nagalagam street drainage, which is before Council, would have been sanctioned early, hence I did not ask that this Layard's Broadway drainage should be reserved to be done departmentally. The former scheme has not yet received sanction, so I request that this work—Layard's Broadway drainage—be not given on contract, as originally intended, but be done departmentally.

I am, &c.,

S. W. DASSENAIKE,
Acting Superintendent of Works,
Municipal Council.

The Chairman, Municipal Council, to the Hon. Mr. F. A. Cooper, C.M.G., M.M.C.

No. 140. Colombo, April 17, 1902.

Agreements for Works.

SIR,—I HAVE the honour to forward to you the accompanying papers (to be returned).

I am, &c.,

R. R. DUNUWILLE,
for A. S. PAGDEN,
Chairman, Municipal Council, and
Mayor of Colombo.

The Director of Public Works to the Chairman, Municipal Council, Colombo.

No. 1,088. Colombo, April 19/21, 1902.

Agreements for Works.

SIR,—WITH reference to your letter No. 140, dated the 17th instant, I have seen Mr. Dassenaike on the above subject, and return the papers.

2. It is obvious, with the number of small works, more especially petty repairs, that from time to time require immediate attention, that a permanent staff of artificers and coolies working on check-roll must be retained by the Municipal Council. Such is the procedure adopted, I believe, by every Municipal Council and other similar authority.

3. Having a permanent staff of artificers and coolies, it is obviously to the interest of the ratepayer that such staff should be practically continuously employed, and the question naturally arises as to what is the minimum staff necessary for the prompt and efficient execution of such immediate repairs, and to what extent will their continuous services be required for carrying out such repairs. It is obvious that the extent of such work will be of a varying nature, and consequently it is in the interest of the ratepayer that at times work which might otherwise be done on agreement or contract should be carried out by the permanent staff on check roll.

4. As to what portion of the remaining work can be done on contract or agreement is a matter that depends to some extent upon circumstances.

5. There are certain classes of work which require specially trained men, such as road maintenance and drainage works The ordinary contractor has probably not at his command men specially trained in such work; the result therefore of contract work in such cases would be the employment of inexperienced men, the work would be badly done, the public put to great inconvenience, and the cost probably excessive.

6. Such works as erection of buildings, bridges, and the like, extensive alteration or repairs to buildings and works, supply of material and transport, may, as a general rule, with advantage be the subject of public tender and contract.

7. In cases of small works of the above nature, say estimated cost not exceeding Rs. 1,000, it is very doubtful if the work involved in the preparation of detail drawings, specifications, &c., is worth any apparent advantage to be gained by public tender. In such cases I would suggest that tenders be invited from selected contractors of known experience in the particular work, and the Chairman authorized at his discretion, with the advice of the Superintendent of Works, to enter into "lump sum" agreement for the execution of such work.

I am, &c.,

FRANCIS A. COOPER,
Director of Public Works.

EXTRACT from Minutes of Standing Committee of 23rd April, 1902.

Business.	*Orders.*
22. Letter No. 461 of 16th April, 1902, from Superintendent of Works, forwarding specification, &c., for drainage, Layard's Broadway.	22. Resolved (Mr. Perera dissenting)—That the work be done departmentally, and that the services of the Works Department staff be maintained.

Annexure B.

18. We view with satisfaction the extent to which the system of carrying out public works on agreement is adopted, more especially in connection with the upkeep of roads, such as breaking metal, clearing jungle, side drains, spreading and consolidation of metal, and we urge the desirability of extending the system as far as practicable. (Report of the Public Works Commission of 1901).

Annexure C.

CONTRACTS.

We are informed that the system of giving contracts for the maintenance of roads is at present on its trial; but, from the evidence adduced, it would seem that the system is being carried out in a manner that must in some instances at least ensure its failure. We are decidedly of opinion that a properly arranged system of contracts would effect a very practical increase in the powers of supervision of superintending officers, and that the result would be a distinct diminution in the cost of maintenance of roads, without any risk of detriment to their condition. Maintenance contracts should, in our opinion, be given either for the whole length of a road to a substantial and capable contractor, or for small lengths of from 5 to 10 miles to men who have served in the Public Works Department as overseers or pioneers, and who are consequently known to be qualified; and the conditions of contract should be so drawn up that on all points there should be a clear understanding, both on the part of the contractor and on the part of the Government. (Report of the Public Works Commission of 1880).

Annexure D.

It is very difficult to say whether the expenditure connected with the Municipality is well managed or not. Little information can be got out of statements or returns, and it is only by careful personal inquiry into various items that a reliable opinion can be formed. I have not been able to hold such inquiries. It seems to me that the cost of certain works is high—for instance, the upkeep of parks and conservancy of the lake—but I am not at present in a position to say that the outlay is excessive. A great deal of the money seems to be spent on check-roll, and comparatively little on contracts. I am not satisfied that the amount of supervision exercised is sufficient to secure proper returns from check-roll labour, I will take one instance, that of watering streets. There was practically no supervision over this, except that of the overseers, who might, as far as I could see, have charged for carts that were never used, and even for days on which no watering was done. If it rained about midday, a morning's watering could be charged for, even if the carts never went out. No one would complain, as the residents do not know on what days the streets should be watered. In the parks, again, a large staff is paid, but, as far as I could discover, half of them might be doing nothing, or not even present. The contract system, where it can be introduced, is the best, as far less money need be spent in supervision. For some reason, which I have been unable to discover, there is a great lack of competition for Municipal contracts, the consequence being that the few persons who do tender have almost a monopoly, and put in very high and consequently prohibitive rates. In order to ascertain if possible the cause, I took up the question of gravel supply myself and had advertisements framed containing conditions as far as possible favourable to applicants. Men were not called on to make any deposits, and could tender for the whole town or one street as they liked. I had the notices widely distributed through Kachcheri headmen, quite independent of the Municipality. The results were very disappointing; only a few contractors appeared, no new men came forward, and in many cases the rates were absurdly high. Every effort should be made to encourage people to take contracts under the Municipality for, on the whole, healthy competition is the best check on expenditure. The skilled work done by the Works Department is, I think, very creditably performed. (Mr. Ellis's Report on the Colombo Municipal Council, February, 1901).

Annexure E.

EXPENDITURE ON PUBLIC WORKS.

There is a very large expenditure under the head of Public Works, and though we are of opinion that the amount does not exceed the sum which might advantageously be spent in works admittedly desirable, if not absolutely necessary, we are not satisfied that the supervision exercised over this large outlay is sufficient to prevent waste and fraud. The books which we examined were not so kept as to ensure the fact that the metal and gravel paid for were undoubtedly supplied, and we are satisfied that even the most careful examination of the work while in progress, or after completion, is not sufficient, in the absence of accurate registers, to prevent the possibility of fraud.

We observe with some surprise that, though in 1873 the Government relieved the Municipality of the charge of 10 miles of trunk roads, and though it took over 3 miles more in 1879, there has been no reduction in the expenditure in consequence of the relief thus afforded. Indeed, the average annual expenditure on the roads for the last ten years exceeds that of the previous ten years. We have been unable to find any satisfactory explanation of this fact. In order to ascertain the cause, the Commission were anxious to obtain certain returns with reference to the work performed on, and the materials supplied to, the different roads. It was however discovered that the books and accounts of the department were kept in such an unsystematic manner that it would have been impossible, without immense and protracted labour, to obtain trustworthy returns or accurate information.

From a perusal of the proceedings of a Select Committee, which inquired into the affairs of this department, the Commission are of opinion that too much confidence is reposed in subordinates, who, however trustworthy they may be, cannot properly be allowed the exercise of greater responsibility than is consistent with the positions which they occupy. (Report of the Commission upon the Financial Condition of the Colombo Municipality, 1886).

Annexure F.

REPORT OF THE STANDING COMMITTEE ON KANDASAMY'S CASE.

UPON consideration of the papers sent, and examination and inquiry into the matters referred to therein, we have agreed to report as follows :—

1. All that has come before us has pointed to the necessity of an immediate and searching investigation of the methods of account-keeping at present in vogue in the Department of Works, with the view of ascertaining the exact extent of the mischief that it seems certain has already been wrought, and of devising measures that will prevent their recurrence.

2. The suggestion is not altogether new. It is rather the repetition—this time enforced by considerations it is nearly impossible to ignore—of views that have been frequently expressed before, and recalls a series of persistent, but apparently not very successful, efforts to introduce some obvious and necessary safeguards in the management of the accounts of that department.

3. So long ago as 1886 Mr. Wm. Henderson, who was appointed to report on the accounts of the Council, had suggested, in regard to the Department of Works, certain steps for the purposes of account keeping and audit, and appended to his report certain forms, the adoption of which he recommended.

4. Three years later the Council appointed Mr. Grenier to examine the accounts of the Works Department and to offer suggestions as to improvements. He made some suggestions with the view,

as he expressed it, of enabling the members, representing the taxpayers, to see that the funds of the Corpation are fairly disbursed. But with these suggestions the Superintendent of Works disagreed.

5. In 1891 the audit of the accounts was given over to the Auditor-General. He pointed out and laid stress upon the necessity of obtaining the sanction of Council when the expenditure on an estimate was to be exceeded or a deviation was made from any of its items.

6. And from time to time the Standing Committee made resolutions in regard to the method of keeping accounts and in regard to the statements to be submitted. These resolutions, this Committee regret to find, were oftener disregarded than observed. Quite recently—during this year—it was pressed upon the Chairman by the Superintendent of Works that the procedure laid down in the resolutions was tedious and unnecessary, and the Auditor-General requested that the officers concerned should be called upon to show cause why the resolutions should not be carried out, and that those resolutions against which no cause could be shown should be carried out at once, and that the Chairman should note his own views in regard to the maintenance of those to which the officers take exception. Among these resolutions of the Standing Committee, it may be noted, were resolutions that had been passed by the Council. One of these is referred to in the Auditor-General's report of 1895, paragraph 9.

7. The necessity for some system that should prevent extravagance, abuses, and frauds was further emphasized by the judgment of the District Court of Colombo in case No. 13,659 of that court. So strongly was this necessity felt that the member for Kollupitiya (Mr. Morgan) moved in Council for the appointment of a Special Committee to inquire into the criticisms made in the judgment. But the motion was withdrawn as the case had gone up in appeal.

8. The disclosures made upon the investigation of certain charges preferred against the Head Overseer of that department (Kandasamy) put beyond possibility of doubt the pressing need there is for a thorough inquiry into the methods of business and account keeping in that department.

9. The charges, as framed in March by the Superintendent of Works, were six in number.

10. Of these, Nos. 1 and 2 are included in the first and second charges made by the Superintendent of Works on 24th August, 1901; Nos. 4, 5, and 6 are included in the third charge of 24th August.

11. As to charge No. 3, the Superintendent of Works admits that the item Rs. 85·58—with a very slight difference in amount—was incurred on the Superintendent of Works' responsibility (see letter of the Superintendent of Works to Chairman of 29th October, 1901, in reply to Head Overseer's explanation of 15th October.)

12. As to this admission, it is to be observed that while the Superintendent of Works says the gates had not been completed in January, and that he ordered in January that they should be completed, in the Progress Report he says the work was completed in December.

13. We may note also that his remark on the readiness of Head Overseer Kandasamy and others to take advantage of some irregularities to arrange for others is not supported by the facts, because the work he is speaking of was not under the supervision of Kandasamy, but of Head Overseer Wijeyeratne.

14. To come to the present charges against Head Overseer Kandasamy—those made on 24th August.

15. Beginning, for convenience, with the second charge, that of instigating Jayewardene to make the alterations in estimates Nos. 118 of 1898 and 154 of 1899, and 42/3 and 42/4 of 1899, we find that these alterations are admitted by Romaldo, who says that owing to insufficiency of funds on one estimate these were, by direction of the Head Clerk, transferred to another. The Head Clerk Silva acknowledges that it was the general practice for him to authorize the clerks in such a case to charge to another estimate where there are funds. This shows that the story of Jayewardene, a relative of the Head Clerk, cannot be true.

16. Then there is the statement of Mr. Ludekens that it is the practice, when there are no funds, to charge items of payment to other estimates, after consulting with the Head Clerk. Mr. Ludekens adds that the practice is proper and regular, and that it had been followed before.

17. As regards the first charge—relating to the requisition for timber—no other instance is pointed out of such an alteration of a requisition which was required for the purpose of charging expenditure on one estimate to another. And it is further suspicious that the requisition is not forthcoming, and that it is alleged by the clerks that it was these requisitions only that were destroyed without reference to Chairman, Standing Committee, or Council, while documents of less importance are referred to the Chairman and Council before they are destroyed. (See Minutes of January, 1898.)

18. Comparing an undated letter of the Superintendent of Works of April, 1901, with his letter of 9th July, 1901, we find that the expenditure incurred on the same item is charged differently in the two accounts, which plainly shows his lack of definite and reliable means of information. (See Annexures A, B, and C.)

19. He gives also a statement showing valuation of the whole work done on the Bambalapitiya market by the contractor, and accounting for the expenditure appearing in the books of his department as having been incurred. But upon inquiry made from the Head Clerk as to certain items referred to in that statement, it was admitted that the items could not be traced in the books. Such an admission is easily understood in view of the fact that no book or document is kept to show the actual expenditure incurred for labour and for materials separately on any item of an estimate, and that, therefore, it is impossible to fix the responsibility upon any one in particular.

20. The third charge is almost a natural consequencef rom this state of things. It seems evident the Head Overseer found a certain sum of money put down for labour, and a certain sum for the different materials, and, in order to meet the expenditure, he "guessed" what items of such expenditure should be placed proportionately against each item of the estimate, and the Superintendent of Works therefore could not say himself from the books exactly what each item did cost, and how far such expenditure was over the cost of any such item according to the date of work.

21. So, though the Superintendent of Works swore in court as follows: "I produce a statement, marked D 5, of the quantities and cost of the work we had to do to complete the building after we took over. I swear that these figures are correct"—he had on cross-examination to admit that the actual cost of certain items of the work ought to be at a lower rate than appears in his statement.

22. In fact, it was simply impossible for the Superintendent of Works, as well as for the Head Overseer, to have given a correct statement, as there existed no documents from which they could make it up.

23. In the explanation given by the Head Overseer he notes fifty-one instances of such irregularities as the result of a week's search of the books which was allowed him in order to enable him to explain.

24. It is our opinion, therefore, that, although the Superintendent of Works in his letter of April says these irregularities are not of ordinary occurrence, they occur far too frequently, his subordinates taking advantage of the facilities afforded by the want of proper checks. We examined the clerks, the workshop overseers, and Head Overseers, and we find traces not only of continual irregularities, but even of what would seem to be frauds.

25. For example, in Nos. 49 and 50 out of the instances given by the Head Overseer (see annexure marked D) we find in estimate No. 64/16 of 1899 an order No. 2,299 without a receipt from the overseer or any other person competent to give a receipt, except the receipt appearing on the face of the order and of the distribution-roll, respectively, for the quantity received on each order; 81 cwt. of firewood are paid for, whereas the overseer states in his distribution-roll that he received only 66 cwt. on order No. 2,299. Similarly, in estimate No. 72 of 1899, 90 cwt. of firewood appears to have been paid for, although the overseer reports on the face of the order and of the distribution-roll that he received only 50 cwt. upon that order.

26. All but two of these fifty-one instances, it should be remembered, are collected from the month of December alone, after a search of only a week. The list for the other eleven months of the year, if it could be made, might at this rate prove startling.

27. These considerations point inevitably to the existence of a very serious and widespread mischief, and one for which a remedy must at once be sought. The only effectual remedy in our opinion is the appointment of a Special Committee of this Council to ascertain how far the mischief has operated since 1899,—since the year, that is, when the books that had before been kept ceased to be kept, and the proper checks were abandoned. Such a Committee might also ascertain whether, and how far, it is now possible to recover what has been by abuses and frauds lost to the Council; and it will suggest the means and methods of preventing a recurrence of these evils. Seeing that the amount annually estimated is not less than about Rs. 300,000, we certainly think that strenuous efforts should be made to provide the best checks and safeguards, a work which a Special Committee, with the assistance and guidance, say, of an experienced officer like Mr. Brohier, the late Assistant Auditor-General, will easily and effectually accomplish.

28. In the meantime, we consider that it is desirable, if the Chairman has not done so already, to order that the keeping of the books discontinued be resumed at once.

29. We think the clerks and others referred to in the papers should also be called upon for explanations; and that further action in the whole matter should await a report by the Special Committee we hereby recommend.

J. L. VANDERSTRAATEN, M.D.
CHAS. PERERA.
CHAS. P. DIAS.
ARTHUR ALVIS.
H. A. JAYEWARDENE.

December 9, 1901.

CHAIRMAN'S DISSENT FROM REPORT OF STANDING COMMITTEE ON KANDASAMY'S CASE.

I AM unable to agree with all the proposals set out in the report of the Standing Committee.

The Council has never, so far as I am aware, prescribed any form of books or accounts to be kept by the Works Department, and resolutions of the Standing Committee on this point are of no binding effect unless confirmed by the Council. The resolution of Council mentioned in section 6 of the report does not deal with the method of keeping accounts, but is to the effect that the Superintendent of Works is not to over-expend an estimate without authority. I cannot concur in the statement in section 27 (line 5) that the proper checks were abandoned. The report does not state what those checks are, and I have been unable to find that any form of accounts were kept prior to 1899, which afforded any more efficient check on irregularities than those kept since that date, and for the same reason I cannot concur in the proposal that the books discontinued should be resumed at once.

I agree that the system of accounts in the Works Department requires examination in order to discover a means of preventing irregularities of the nature disclosed in the report, and I would suggest that an experienced accountant, such as Mr. Brohier, the retired Assistant Auditor-General, should be employed to make this examination, and paid for his work. His report and suggestions should be laid before Council, and, if the Council wishes, a Special Committee can then be appointed to recommend to Council the form of books and system of accounts to be adopted, and the Council will then finally decide the system to be observed in future.

I consider that the Standing Committee have already before them ample information to guide an accountant in making the necessary examination and in detecting further irregularities and frauds, if there be any. (Here I would note with regard to section 25 that though the distribution-roll shows 55 cwt. of firewood less received than paid for on the orders, the roll shows a quantity of 60 odd cwt. received for which no order numbers are given.)

As regards the charges against Kandasamy, I am still of the same opinion as set out in my memorandum of 5th November, 1901. The alterations by Jayewardene (see section 15) appear to have been made at an earlier date than those in the Ledger, for the Ledger entries are not made until all payments for labour are closed, whereas the requisition on which payments are made is compiled from the labour statements which Jayewardene says he altered.

As regards charges 2 and 3, my observations are practically untouched. Kandasamy knew that the statements of account he furnished had no foundation, and yet he swore to them in court. I do not consider it necessary or desirable that he should be retained in the Council's service, whether to assist in the examination of the Council's books or otherwise.

A. S. PAGDEN,
Chairman, Municipal Council, and
Mayor of Colombo.

December 11, 1901.

RESOLUTION OF THE MUNICIPAL COUNCIL, NO. 16 OF 13TH DECEMBER, 1901.

That Kandasamy be dismissed, and that a Special Committee of this Council be appointed to inquire into the sufficiency of the method of keeping accounts now in use in the Department of the Superintendent of Works and of their audit; and, in case it be found insufficient, to suggest an adequate and appropriate scheme of account keeping. Also to make an investigation into the accounts of the department (so far as they have been kept according to the present system) from the year 1899 to the end of the current year, with the view of ascertaining what losses, if any, this Council has sustained by irregularities on the part of the subordinate officers of the department, and how far those losses may be recoverable. The Special Committee so appointed to have power to engage and pay for the services of a competent person in making the necessary examination and suggestions. The Committee to consist of the Chairman, the Hon. Mr. F. A. Cooper, C.M.G., Major L. F. Knollys, C.M.G., Mr. D. W. H. Skrine, Mr. C. Perera, Mr. P. Coomaraswamy, Mr. R. H. Morgan, Mr. Arthur Alvis, Mr. James Peiris, and Mr. H. A. Jayewardene—three to form a quorum.

NOTES ON THE INSPECTION OF BOOKS, MUNICIPAL COUNCIL, 1901.

All articles indented for on the contractors and others are supplied on orders issued by the Superintendent of Works. The order specifies on what particular estimate or vote the articles have been requisitioned. The order forms are kept lose and in duplicate. One goes to the contractor, the other to the storekeeper. A separate book called the "Balance Book" is kept, and accounts are opened under each estimate. When articles are ordered under any particular estimate an entry is made therein of the articles ordered, inserting at the same time the value or probable value thereof, and simultaneously with the entry being made an order on the contractor is drawn out. The book and the orders are then submitted to the Superintendent of Works, who signs the orders after a reference to the entries in the book. In this way the book or the entries in the book are to all intents and purpose an exact counterpart of the order, and it is important, for this reason, that all entries made therein should be initialled by the Superintendent of Works at the time the orders are signed. The system in this respect has undergone a change. All order forms were previously stitched into books and kept in triplicate, the original being retained as a counterfoil of the order. Why and under whose authority this practice has been discontinued should be explained. This book also serves a double purpose, as it shows the balance available under each estimate. As a precautionery measure, the expenditure is deducted from the block vote monthly to guard against any possible over-expenditure.

When the claims of the contractors and others are received a voucher is prepared and the entries transcribed into the Voucher Book. A separate column provided therein denotes the number of the order on which the articles were purchased, thus establishing a check or means of reference between the Voucher Book and Order Book, and this reference is further extended when the particulars from the Voucher Book are transcribed or posted into the Ledger under the different estimates. The vouchers are next subject to careful scrutiny by the Head Clerk and are then submitted, with the Voucher Book, to the Superintendent of Works, who certifies to the correctness of the voucher and initials and dates the Voucher Book. The dates of the debits in the Ledger merely indicate when the items were posted, and as this is misleading it has been found necessary to suggest that a separate column be opened for date of payment.

MEMORANDUM BY CHAIRMAN.

The former method of keeping order books in triplicate is being temporarily adopted, pending the consideration of the system of accounts in the Works Department by the Special Committee appointed for that purpose on 13th December.

December 24, 1901.

A. S. PAGDEN,
Chairman, Municipal Council, and
Mayor of Colombo.

Financial Assistant and Accountant, Public Works Department, to the Chairman, Municipal Council, Colombo.

Colombo, April 17, 1902.

SIR,—IN accordance with your letter No. 68 of 5th February last to the Director of Public Works, I have the honour to report as follows:—

I have audited the accounts of the Works Department, Colombo Municipality, for the year 1899, examined and checked the order books, and compared some of the distribution rolls with the classification of expenditure as recorded on the check-rolls affected by them.

The total expenditure as shown in your Administration Report for the same year under the several estimates affecting the Works Department agrees—except in a few cases as under—and amounts to the sum of Rs. 278,167·23:—

	Rs.	c.
Estimate No. 47, Dematagoda: oil, carbolic acid, &c.:		
Administration Report states Rs. 227·14, Superintendent's Ledger ...	223	14
Estimate No. 78, Conservancy of Lake:		
Administration Report states Rs. 2,639·11, Superintendent's Ledger ...	2,087	13
Estimate No. 103, Contingencies:		
In connection with night soil depôt, Narahenpitiya:—		
Administration Report states road, Rs. 6,959·39, Superintendent's Ledger	7,459	4
Administration Report states buildings Rs. 5,613·73, Superintendent's Ledger	4,995	65
Galle Face wall, advance account	565	95

			Rs. c.
Cattle shed, Narahenpitiya, advance account	...	...	218 57
Cart shed, Narahenpitiya, advance account	...	...	195 23
Repairs drain, 3rd Cross street, advance account	...	...	30 93
Repairs drain, 96, 4th Cross street, advance account	...	...	28 42
Bridge, Washers' lane, advance account ...	...	...	409 38*
Side rails, Urugodawatta bridge, advance account	...	...	2 25
Deviation of main road, through Uplands, deposit account	Rs. 17,762 89		
Less value of rubble sold to Messrs. Boustead Brothers	Rs. 1,180 70		
			16,582 19
Estimate No. 7, Stationery	...	...	11 79
Estimate No. 8, Furniture	...	...	261 84
Estimate No. 13, Capture and destruction of dogs	...	...	12 98
Estimate No. 9, Furniture, Assessment account	...	...	27 9
Estimate No. 13, House numbers, &c. ...	...	...	587 69
Estimate No. 99, Purchasing of disinfectants, &c.	...	...	122 36
Estimate No. 101, Repairs to depôt buildings	...	...	50 44
Estimate No. 103, Contingencies, Health Department	...	...	152 24
Estimate No, 105, Maintenance and repairs to Camps	...	...	179 86
Estimate No. 107, Expenses of disinfection	...	...	121 20
Estimate No. 109, Scavenging ...	...	...	21,562 85
Estimate No. 138, Miscellaneous ...	...	...	170 74
Levelling site and gravelling road, Health Department	...	...	222 38
		Total ...	334,478 57

* It appears that an estimate was specially sanctioned by Council in 1899 for this work.

The Order Books (numbering six) were carefully checked with the vouchers paid; the vouchers are supported by the number of order with details. I have not the slightest hesitation in stating that this system of Order Book is extremely unsatisfactory and has not, as I now understand, been a bit too early discontinued. Order Books in foil, counterfoil, and triplicate, numbered in print from 1 upwards, would be by far the most systematic and accurate method of recording liabilities and finally checking contractor's claims.

The Estimate Ledgers for the year number four, and I am of opinion that the information recorded in all of them but the one for the metalling and gravelling is far too elaborate; twelve pages of one Ledger were utilized in recording the transactions of estimate No. 62, general upkeep of roads. A great deal of extra clerical labour is involved through having to detail all the information that they at present possess, and I am certain has been performed to the detriment of the more important check between orders, receipts of stores, and finally the claims from contractors for same.

From my check of the Order Books with the several entries in the Ledgers it would strongly appear that the payment vouchers for materials supplied were seldom or never checked with same, the result being that in some instances materials were presumably delivered and paid for in excess of orders.

I would call attention to check-roll No. 18 for May, which consisted of ten sheets; the overseer in charge of same was paid for fourteen days and also would appear to have drawn an additional amount for the fourteen nights; this overseer apparently supervised about 350 labourers (his pay was at the rate of Re. 1·25 per day). I should think that it was extremely improbable that he could accurately register daily attendance of each one (as was, and is, I presume, the system in vogue), and in addition supervise and inspect the work performed by them. One of the ten sheets referred to appears to have been issued on the 4th of the month, but the attendance of coolies was recorded on same for the 1st, 2nd, and 3rd of the same month.

In connection with the checking of the distribution-rolls with the check-rolls I am afraid that this important duty was delegated to too junior a clerk; some of them bear signs of having been altered from one estimate to another, as well as of alterations made in pencil either increasing or reducing the labour. They do not appear to have been issued out in any systematic way, or to have been signed by any one but the overseer in charge of the work.

I annex for your information ten classified lists showing irregularities and other items that would require explanation, should you wish it. I am of opinion that they tend to prove that the system adopted with respect to the general check and keep of the accounts of the Works Department was far from being as satisfactory as would have been expected.

H. A. MARTIN,
Financial Assistant and Accountant,
Public Works Department.

Orders for which payments have apparently been made twice.

Estimate No. 62—General upkeep of roads: orders 1,089 for eight cart loads blocks of stone, Rs. 22. First payment was made in July and second in November (see pages 36 and 38 of Ledger 1.)

Estimate No. 103—New road to night soil depôt, Narahenpitiya: order 1903 for 100 lineal feet hora planks, 12 by 2, Rs. 22; was debited once on 1st December, 1899, and again on 31st December, 1899.

Estimate No. 83—Upkeep of Racquet Court: order 2,213 for twelve bamboos (Rs. 2·88) and ¼ cwt. coir string (Rs. 2·75); paid for first in November and second in December.

Items debited to one Estimate and credited to another.

Estimate No. 192/1—Drainage, Guildford Crescent: Rs. 135 debited to the above estimate and credited to Estimate No. 222/98. Letter 607 of 4th August, 1899.

Estimate No. 64/6—Metalling Norris road: Rs. 36·61 debited to above and credited to Estimate No. 68, Trunk road, Fort to Wellawatta. Letter No. 434 of 7th June, 1899.

Deviation of road through Uplands: credit of Rs. 1,180·70 appears (see letter No. 834 of 10th October, 1899).

Estimate No. 64/23—St. Sebastian street: debit of Rs. 228 and credited to Estimate No. 72, new road through Silversmith street quarry. Letter No. 41 of 25th January, 1900.

Estimate No. 64/24—Old Moor street: debit of Rs. 5·32 and credited to Estimate No. 72. Letter No. 764 of 22nd September, 1899.

Estimate No. 64/26—Mill street: debit of Rs. 94·05 and credited to Estimate No. 72. Letter No. 41 of 25th January, 1900.

Estimate No. 64/27—Silversmith street: debit of Rs. 912 and credited to Estimate No. 72. Letter No. 764 of 22nd September, 1899.

Estimate No. 64/30—Vincent street: debit of Rs. 351·50 and credited to Estimate No. 72. Letter No. 764 of 22nd September, 1899.

Estimate No. 65/16—Albert crescent: credited with Rs. 3·76. Letter No. 898 of 21st October, 1899.

Estimate No. 47—Dematagoda, oil, &c.: a sum of Rs. 15 credited to the estimate and debited to estimate No. 55, Tools, &c., Slaughter-house. Letter No. 1,007 of 8th December, 1899.

Estimate No. 68—Trunk road, Fort to Grandpass: debit of Rs. 1,097·25 and credited to estimate No. 72. Letter No. 919 of 4th November, 1899.

Estimate No. 77—Drain, Turret road: debit of Rs. 9·50 and credited to estimate No. 72. Letter No. 919 of 4th December, 1899.

Estimate No. 83—Upkeep of Racquet Court: debit of Rs. 5 for rent paid to Military; supporting voucher wanted.

Estimate No. 140—Urgent repairs: debit of Rs. 8·74 and credited to Gall Face wall (see folios 96 and 104 of Ledger No. 2). Letter No. 862 of 14th October, 1899.

Estimate No. 221/98—Sewer, Main street, Pettah: debit of Rs. 140 (pipes); supporting voucher wanted. Letter No. 457 of 19th June, 1899.

Estimate No. 221/98—Credit cents 20, unexpended balance by Director of Public Works.

Estimate No. 222/98—St. John's main drain: debit of Rs. 119; voucher wanted. Letter No. 457 of 19th June, 1899.

Estimate No. 222/98—Credit Rs. 23·70, unexpended balance by Director of Public Works.

Estimate No. 207/1/98—York street improvements: credit Rs. 9·53, unexpended balance by Director of Public Works.

Estimate No. 161—Widening Norris road: credit Rs. 40·87, unexpended balance by Director of Public Works.

Estimate No. 254/98—House connection with sewers: debit of Rs. 98; voucher wanted. Letter No. 457 of 19th June, 1899.

Estimate No. 76/98—Completion of Cramer's lane improvement: debit of Rs. 475 and credited to estimate No. 72. Letter No. 919 of 4th November, 1899.

Estimate No. 68—Trunk road, Fort to Grandpass: debit of Rs. 49 (pipes); voucher wanted. Letter No. 457 of 19th June, 1899.

Estimate No. 95—Contingencies: debit of Rs. 4·50, mamoties, transferred from vote No. 70. Letter No. 816 of 4th October, 1899.

Surplus Stores.

The following debits appear:—

Estimate No. 192/8—Drain at the back of Gasworks latrine: debit of Rs. 2·78.
Estimate No. 42/4—Repairs, Dean's road market: debit of Rs. 5·56.
Estimate No. 42/9—Repairs, Grandpass market: debit of Rs. 2·78.
Estimate No. 42/10—Repairs, Cramer's Lane market: debit of Rs. 5·56.
Estimate No. 56/1—Repairs, Wellawatta toll-house: debit of Rs. 11·12. Letter No. 36 of 24th January, 1900.
Estimate No. 56/4—Repairs, Bambalapitiya toll-house: debit of Rs. 11·12. Letter No. 26 of 24th January, 1900.
Estimate No. 56/5—Repairs, Welikada toll-house: debit of Re. 1·39. Letter No. 36 of 24th January, 1900.
Estimate No. 56/8—Repairs, drawbridge, toll-house: debit of Rs. 2·78. Letter No. 921 of 6th November, 1899.
Estimate No. 103—Contingencies: debit of Re. 1·44. Letter No. 601 of 3rd August, 1899.
Estimate No. 110/6—Repairs, St. Sebastian latrine: debit of Rs. 2·78. Letter No. 921 of 6th November, 1899.
Estimate No. 110/8—Repairs, Hulftsdorp street: debit of Rs. 2·78. Letter No. 921 of 6th November, 1899.
Estimate No. 57/2—Repairs, guides' shelter: debit of Rs. 2·78.
Estimate No. 110/9—Repairs, Grandpass latrine: debit of Rs. 5·56. Letter No. 921 of 6th November, 1899.
Estimate No. 110/10—Repairs, Modara latrine: debit of Rs. 2·78. Letter No. 921 of 6th November, 1899.
Estimate No. 222/98—St. John's main drain: debit of Rs. 12·98. Letter No. 601 of 3rd May, 1899.
Estimate No. 161—Widening Norris road, from 1st to 4th Cross street: debit of 72 cents. Letter No. 601 of 3rd May, 1899.
Estimate No. 110/13—Repairs, St. John's latrine: debit of Rs. 2·78. Letter No. 921 of 6th November, 1899.
Estimate No. 110/14—Repairs, Fort latrine: debit of Rs. 5·56. Letter No. 36 of 24th January, 1899.
Estimate No. 110/15—Repairs, Beira latrine: debit of Rs. 2·78. Letter No. 921 of 6th November, 1899.

Departmental Charges debited to Deposit Accounts.

	Rs.	c.
Gravelling road to "Storm Lodge"	14	22
Drain, St. Paul's school	10	66
Drain, De Waas lane	16	56
Consolidating metal, Railway yard, Maradana Junction	35	0
F. L. Roles, for road scrapings	4	12½
Repairing drains, 36, Chatham street	1	9
Drain connection, Victoria Arcade to sewer	10	2
Consolidating metal, Wharf premises	15	0
Consolidating metal, Chatham street	21	66
Consolidating metal, new roads to grain sheds	20	0

Fines.

Estimate No. 22—Quarterly whitewashing of slaughter-houses: Contractor S. D. Samsudeen fined Rs. 5, so noted in the Order Book.

Estimate No. 111—Quarterly whitewashing of latrines: Saibo Doray fined Rs. 5.

Unexpended Balances from Advances made monthly for Payment to Labourers.

1899.	Rs.	c.	1899.	Rs.	c.
January	15	10	July	52	56
February	11	16	August	24	68
March	15	96	September	51	21
April	24	48	October	68	88
May	12	2	November	28	69
June	3	74	December	17	34

Postings in the Ledger not agreeing with the supporting Voucher.

Voucher No. 620/257—Estimate No. 195*a*, Metalling Rifle street, Rs. 3·56 for oil, but this amount is debited in Ledger to estimate No. 195*b* for metalling Bridge street, Malay street to Galle Face Church road.

Voucher No. 321/65, July—Estimate No. 190, Wall and dry-earth closet, No. 9, Hulftsdorp street, Rs. 4·90 for 100 cabook stones, but debited to estimate No. 95, Contingencies, ordered on the former.

Voucher No. 1,867, December—Estimate No. 103, Cooly lines, night soil depôt, Narahenpitiya, W. A. Boteju draws for materials supplied Rs. 133·55; the amount appears posted against estimate No. 103 for road to night soil depôt.

Where Savings should have been effected.

Materials ordered as per special provisions in the estimate, but apparently in some instances partly supplied and others altogether unsupplied :—

Estimate No. 64/24—Metalling Old Moor street, Dam street to Kuruwe street : 5·60 cubes gravel, Rs. 33·60, not debited, but the estimate only shows a balance of Rs. 22·75.

Estimate No. 64/31—Metalling Urugodawatta road : order 1,027 for 11·20 cubes gravel, Rs. 67·20 (Rs. 6 per cube) ; only 4 cubes debited, but the estimate shows a balance of only Rs. 6·67.

Estimate No. 64/33—Metalling Stuart street, Church street to Welikada road : order 2,121 for 2·08 cubes gravel, Rs 12·48 ; not debited, but the amount of the estimate was fully spent.

Estimate No. 64/35—Metalling Hyde park corner, Union place to Park street : order 2,122, 765 cubes gravel, Rs. 45·90, not debited ; only a saving of 9 cents effected on the estimate.

Estimate No. 95/6—Gravelling Gintupitiya street, Cheku street to Hill street : order 513 for 50·80 cubes gravel, Rs. 279·40 ; only 24 cubes, Rs. 132, debited, but only a saving of Rs. 115·74 effected ; should have been Rs. 147·40.

Estimate No. 65/30—Galle Face drive : orders 1,638 (200 cubes) and 1,663 (235 cubes) for 435 cubes gravel ; paid for 328 cubes on order 1,638 ; a saving of Rs. 749 should have been made, but the balance on estimate is only Rs. 30·14.

Orders ordered on one Estimate and debited to another.

Estimate No. 69—Trunk road to Wellawatta : order 1,694, ½ gallon cocoanut oil, Rs. 68. ½ gallon castor oil Rs. 1·10 is debited to estimate No. 69, Trunk road to Kotte.

Estimate No. 71—Repair of tools : order 2,192 for 10 cwt. coke, Rs. 22·40, debited to estimate No. 68, Trunk road, Customs Wharf to Kotte toll.

Estimate No. 140—Urgent repairs and works : order 2,056 for 2 hora planks 16 ft. by 6 in. by 3 in Rs. 2·24.

	Rs.	c.
Paid for 2 hora planks, 16 ft. by 6 in. by 3 in.	4	40
Paid for 5 hora planks, 12 ft. by 6 in. by 3 in.	—	
Paid for 2 hora planks, 5 ft. by 4 in. by 5 in.	—	
Paid for 1 hora planks, 9 ft. by 6 in. by 3 in.	11	1
	15	41

and debited to estimate No. 80, Dredging lake.

Estimate No. 140—Urgent repairs and works : order 2,090, 6 bushels boiled lime Rs. 3, 4 bushels slaked lime 96 cents ; debited to estimate No. 42/4, Repairs to Dean's road market.

Estimate No. 140 : order 2,288, 1 jak beam 7 ft. by 6 in. by 4 in., Rs. 2·59, debited to estimate No. 160, Repairs to cooly lines and fence, Madampitiya slaughter-house.

Deviation of road through Uplands :—

	Rs.	c.
Order 2,152, 6 lb. cotton waste	1	32
Order 2,182, 1 bath brick	0	20
⅛ gallon linseed oil...	1	0
Order 2,187, 2 lb. bar soap	0	46

debited to estimate No. 64/35, Hyde Park Corner.

Estimate No. 154—Shed for basket women, Dean's road market : order 2,316, 125 lineal feet galvanized iron sheets, is not debited in Ledger ; but the same number of order for 4 gross iron screws, 1½ inch (Rs. 5·76), appears ordered on estimate No. 103 for Cooly lines, Narahenpitiya, and debited to estimate No. 103, for Depôt Overseer's quarters, Narahenpitiya.

Advance account—Rebuilding drain opposite No. 96, 4th Cross street : order 2,147, for 10 bushels lime, Rs. 2·40, debited to Advance account, Sea Wall, Galle Face.

Repair of side drain, 3rd Cross street : order 2,226. 1,000 slop bricks Rs. 12·87 ; debited 500 bricks Rs. 6·43 to estimate No. 140, Urgent repairs and works. 1,000 was entered first in the Ledger and altered to 500, probably as the estimate could not bear the charge, the balance on it on December 31, 1899, being only 2 cents.

Estimate No. 8—Furniture account : order 208, 18 panes glass, &c., Rs. 4·80, debited to estimate No. 140 (9/0B ·4), marked "transferred" in Order Book ; similarly order 321 for one brass lock Rs. 7·55.

Estimate No. 62—General Upkeep of roads : order 1,251, 3 cubes metal Rs. 30 ; debited to estimate No. 68 Trunk road to Kotte.

Advance account—repairs to side drain, 3rd Cross street : order 2,227, 15 bushels lime, Rs. 3·60, debited to Estimate No. 154, Shed for basket women, Dean's road market.

Estimate No. 70—Purchase of tools : order 521, 2 steel wedges, Rs. 10, debited to estimate No. 80, Dredging lake.

Estimate No. 80—Dredging lake : order 229, 58 hora posts Rs. 319·64, 116 pieces common wood planks Rs. 287·10 ; order 390, 100 slabs common wood Rs. 17, 4 hora logs Rs. 80, debited to estimate No. 81, Filling lake, Union Place.

Estimate No. 82—Upkeep, Victoria Park : order 1,898, 1 piece teak wood, 5 lb. round iron Re. 1·10 ; debited to Estimate No. 86, Upkeep of Galle Face Esplanade.

Estimate No. 64/21—Metalling Skinner's road North : order 1,559 soap, &c., Rs. 2·36, debited to estimate No. 64/31, Metalling Urugodawatta road, St. Joseph street canal.

Estimate No. 64/13—Re-metalling Seabeach road from Reclamation road to Sea street : order 102, 16 cwt. firewood, debited to estimate No. 68, Town Hall to Mattakkuliya.

Estimate No. 75/98 : order 52, 21 bushels lime, debited to estimate No. 68, Fort to Grandpass ; 100 bushels on order 131 is altered in Ledger to 121, to include the above 21 bushels ; both the orders are bracketed in the margin.

Estimate No. 197/98—Barbed wire fence, Dematagoda Slaughter-house : order 1,825, 2 millila beams, Rs. 21·11, debited to Deposit account, Deviation of road through Uplands.

Estimate No. 140—Urgent repairs and work : order 1,787, timber, Rs. 58·43, debited to Deposit account, Deviation of road through Uplands.

Materials paid for in excess of Orders.

Estimate No. 65/30—Galle Face drive: order 1,638 was for 200 cubes screened gravel; this was supplied and paid for, estimate being debited accordingly, but the same contractor, W. A. Boteju, was apparently paid for 128 cubes in addition on the same order.

Estimate No. 64/16: order 2,299 ordered 66 cwt. wood ; 15 cwt. on this order is charged to the estimate and 66 cwt. to Deviation of main road to Uplands (see vouchers 704/326 and 671/324).

Estimate No. 69—Trunk road to Kotte: order 1,039 ordered 20 cubes of metal, paid for 60 cubes ; ordered 2·75 cubes, paid for 21·75 cubes.

Estimate No. 69—Trunk road to Wellawatta : order 1,297 ordered 260 cubes metal, paid for 270 cubes ; another entry in the Order Book for 10 cubes under the number comes after order 1,406.

Estimate No. 72—New road through Silversmith street quarry: order 2,280 ordered 50 cwt. firewood, which was paid for by voucher No. 671/324 ; another 40 cwt. was paid for on the same order later on by voucher 672/324.

Estimate No. 75—Side drain and footway, Layard's Broadway: order 938 ordered 2 cubes metal, paid for 5 cubes; after order 940 the above order is repeated with an item of 3 cubes.

Estimate No. 80—Dredging lake: order 1,326 ordered 16 lb. Danish flat iron, Rs. 2·24, paid for 31 lb. Swedish iron, Rs. 4·15.

Estimate No. 80: order 686 ordered 41 lb. flat iron, Rs. 3·69, paid for 154 lb. Rs. 17·9 (65/0B ·3).

Estimate No. 166—Pipe drain, Parson's road: order 1,704, 10 cart loads seasand at a cost of Re. 1·20, but paid for 300 bushels river sand Rs. 24 (211/0B·1).

Estimate No. 107—Expenses of disinfection: order 1,901 for sundries, 1 lb. blue powder cancelled in Order Book, but paid for (204/0B·3).

Estimate No. 162—Improvement of Norris road: order 465 ordered 25 cartloads seasand; paid for 29 cartloads—4 cartloads in May and 25 in June (64/0B·1).

Estimate No. 250 of 1898—Improvement of office of Superintendent of Works: 1 jak plank, Re. 1·50, debited to estimate, but not included in order 754.

Estimate No. 47—Dematagoda, oil, &c.: order 1,180 for 1 shovel cancelled, but paid for, Re. 1·74.

Estimate No. 85—Upkeep of Gordon Gardens: order 2,139, 42 lb. of oakum paint, paid for 56 lb., Rs. 19·60 (142/0B·3).

Items debited in Ledger, but not supported by Order Book.

Estimate No. 62—General upkeep of roads: order 679, 3 cubes metal, Rs. 28·50. Order 1,027, 4·36 cubes metal, Rs. 41·42.

Estimate No. 75—Side drain and footway, Layard's Broadway: order 939, 150 bushels river sand, Rs. 12.

Estimate No. 56/4—Repairs to Bambalapitiya toll house: order 1,652, 10 bushels slaked lime, Rs. 2·40.

Estimate No. 138—Miscellaneous: 1 pin stapling tool (no order number), value Rs. 10·15.

Estimate No. 70—Purchase of tools: 1 pin stapling tool (no order number), value Rs. 10·15.

Estimate No. 64/35—Hyde Park Corner: order 2,210, 4 yards patent packing, Rs. 2·41.

Estimate No. 42/4—Repairs to Dean's road market: order 1,537, 5 bushels lime, Re. 1·72.

Estimate No. 162—Improvements to Norris road: order 736, 5 bushels lime, value Re. 1·20.

Items appearing in Order Book, but not debited in Ledger.

Estimate No. 62—General upkeep of roads: orders 678, 773, 776, 799, 849, 923, 963, 1,038, 1,123, 1,124, 1,579, 1,844, 1,845, 1,854, 1,919, 1,969.

Estimate No. 69—Trunk road to Kotte: orders 1,040, 1,285, 1,850.

Estimate No. 68—Trunk road, Customs to Kotte: order 628.

Estimate No. 68—Town Hall to Mattakkuliya: orders 453, 1,375.

Estimate No. 70—Purchase of tools: orders 11, 330, 669, 1,784.

Estimate No. 71—Repairs of tools: orders 1,386, 1,418, 1,824, 2,305.

Estimate No. 77—Drain, Turret road: order 1,606.

Estimate No. 72—New road through Silversmith street quarry: order 2,200.

Estimate No. 76—Drain, Ambalama road: orders 16, 1,513, 1,609.

Estimate No. 80—Dredging lake: orders 340, 341, 28 lb. green paint (no order number).

Estimate No. 81—Filling lake, Union Place: order 966.

Estimate No. 83—Upkeep of Racquet Court: order 2,306.

Estimate No. 87—Upkeep of Campbell's Park: order 1,349.

Estimate No. 140—Urgent repairs and works: orders 110, 264, 391, 837, 1,840, 1,842, 1,843, 2,113.

Estimate No. 7—Stationery: order 266.

Estimate No. 64/21—Skinner's road North: order 1,560.

Estimate No. 64/4—York street: order 770.

Estimate No. 64/5—Norris road: order 637.

Estimate No. 64/15—Madampitiya road: order 1,612.

Estimate No. 65/30—Galle Face drive: orders 2,028, 1,663.

Estimate No. 66/5—Mosque lane: order 1,941.

Estimate No. 66/11—Ketawalamulla lane: order 1,947.

Estimate No. 91/8 of 1,898—Culvert, Church street: order 1,645.

Esitmate No. 66/10—Paranawadiya lane: order 1,946.

Estimate No. 295 of 1897—Wall, Maligakanda recreation ground: order 1,796.

Estimate No. 162 of 1897—Market at Bambalapitiya: order 1,274.

Estimate—Repairing Cemetery-keeper's quarters, Kanatta: order 1,745.

Estimate No. 42/3—Repairs, Dean's road market: order 1,437.

Improvement, Chatham street extension: order 2,221.

Estimate No. 56/8—Repair of Drawbridge, toll house: order 2,245.

Estimate No. 42/8—Repair of Gintupitiya street market: store order ½ barrel cement.

Estimate No. 103—Depôt Overseer's quarters, Narahenpitiya: orders 1,749, 2,035, 2,175.

Estimate No. 110/15—Repair of Beira latrine: order 1,834.

Estimate No. 110/4—Repair of Dean's passage latrine: order 1,873 and store order for ¼ barrel cement.

Estimate No. 56/4—Repair to Bambalapitiya toll house: order 2,156.

Estimate No. 154—Shed for basket women, Dean's road market: order 2,301.

Repair of side drain, 3rd Cross street: store order for ½ barrel cement.

Side rails, Urugodawatta road: order 2,292.

Estimate No. 8—Furniture: order 643.

Estimate No. 47—Dematagoda, oil, &c.: order 2,096.

Estimate No. 55—Tools for slaughter-houses: order 1,180.

General.

Check-roll No. 1 for June for Rs. 563·68 is missing in file.

Check-roll No. 9 for April: carters are paid for twenty-four days at Re. 1·50, and carts for nine days at the same rate; some explanation would appear to be necessary.

Check-roll No. 14 for July: carters' time is reduced from original daily attendance; no initials of any responsible officer for the alterations.

Check-roll No. 17 for November is not certified by the Superintendent of Works.

A sum of Rs. 8·74, being for labour during April and May on account of Galle Face wall, was first debited to a separate account in Ledger and afterwards transferred to estimate No. 140 for urgent repairs and works; the further expenditure on account of apparently the same work, amounting to Rs. 565·95, was incurred later on in the year under Advance account.

Voucher No. 658 for June: Tuan Kitchill draws Rs. 4 for removing a carcase of a sheep for burial; includes item Re. 1, fee for depôt, for which no under-receipt is furnished.

Estimate No. 69—Trunk road to Wellawatta: order 1,346; some explanation of the circumstances that led to entering this order in Ledger after it was once paid for and then scoring it through seems necessary.

Estimate No. 172—St. Thomas's latrine: voucher 849 (308/63) July: R. D. S. Wijeyaratne draws Rs. 20 for 1,000 common bricks; the rate seems to be very high.

Estimate No. 95—Repairs to boundary wall, Kanatta cemetery: order 1,337 for 40 bushels of lime appears in order book, but the value of 17 bushels is debited in Ledger to estimate No. 203, Repairs to cemetery-keeper's house,

Kanatta, the balance being charged to the former. The same number of order is recorded against that estimate in Order Book for 23 bushels after order 1,481.

Estimate No. 64/20—St. James's street : order 2,081 for 63 cwt. firewood ; Ledger shows 63 cwt. was first debited, then altered to 29 cwt., and again altered to 21 cwt., apparently owing to the balance being insufficient, there being a balance of only 33 cents to credit on December 31, 1899.

Estimate No. 64/24—Old Moor street, Dam street to Kuruwe street : order 1,296 for oil, value 89 cents, marked "cancelled" in Ledger, but not so in Order Book.

Estimate No. 141—Upkeep of carriage stand : order 1,670, 6 cubes gravel for Rs. 42 ; generally the rate would seem to be Rs. 6 per cube.

Estimate No. 110/15—Repair to Beira latrine : 2 cubes screened gravel at Rs 7 per cube ; Rs. 6 would appear to be the ruling rate.

Estimate No. 103—Contingencies, Health Department: order 2,244 for 1,900 slop bricks was debited in Ledger and again noted as "not paid."

Estimate No. 69—Trunk road to Kotte, labour in August Rs. 129·72; check-roll states Rs. 14·32 of this is on account of contractors ; it does not appear to have been recovered.

Estimate No. 57/4—Repairs of Printing Office: order 224, 6 bushels lime for Re. 1·44, but paid for 4 bushels the same amount ; it would appear that 48 cents is overcharged (134/0B ·2).

Number of orders as noted in the Ledger disagree with those in Order Book in the following instances, though the correct quantity as ordered is paid for :—

Estimate No. 68, Fort to Grandpass.

Order Book.	Ledger.	Order Book.	Ledger.
224 ...	223	227 ...	226
225 ...	224		

Estimate No. 82, Victoria Park	...	Order Book 102, Ledger 101A
Estimate No. 80, Dredging lake	...	Order Book 2,074, Ledger 2,094
Estimate No. 57/6, Repairs, Municipal workshop	...	Order Book 2,314, Ledger 2,228
Estimate No. 57/6, Repairs, Municipal stores	...	Order Book 2,270, Ledger 2,275
Estimate No. 8, Furniture	...	Order Book 179, Ledger 177
Estimate No. 58, Conservancy of Town Hall	...	Order Book 1,242, Ledger 1,240
Estimate No. 58, Conservancy of Town Hall	...	Order Book 1,243, Ledger 1,241

It is not understood how order 1,546 can follow 1,547 in the Order Book, if it were consecutively numbered ; similarly order 1,916 after 1,981, 208 after 417 (estimate No. 140); several instances of this occur.

The following items represent advances made to Superintendent of Works and settled by him by personal voucher and under receipts, but no record of it appears to have been kept in his Ledgers :—

	Rs. c.		Rs. c.
Voucher No. 20, January ...	59 55	Voucher No. 539, May ...	53 86
Voucher No. 243, March ...	9 50	Voucher No. 620, May ...	25 40
Voucher No. 302, March ...	13 81	Voucher No. 1,070, August ...	22 30
Voucher No. 432, April ...	2 96	Voucher No. 1,184, September ...	44 20
Voucher No. 510, May ...	33 49	Voucher No. 1,389, October ...	8 25

The following deposit accounts on which expenditure was incurred are apparently not recorded in the Superintendent of Works' Ledger :—

(1) Consolidating metal on account of tramway, Rs. 94·40, voucher 162, February.
(2) Consolidating metal on account of railway yard, Rs 28·80, voucher 162, February.
(3) Royalty for 833 cartloads of gravel removed from Eladuwakele to Galle Face drive, Rs. 49·98, voucher 1,666 (618/173), December.
(4) Vote No. 2 of 1899, Salaries provisional: salary due to V. P. Seneviratne, Rs. 25, voucher 1,853, December.

Workshop distribution-roll for the first week of December : 2 artificers entered on the 1st was altered to 1 in pencil after the distribution-roll was totalled up for the week.

A similar distribution-roll for the first week in December : items of work not mentioned, 5 labourers at 50 cents altered to 6 after it was totalled—no initials ; again, store coolies 2 altered to 4 after it was totalled.

Distribution-roll, workshop, for the week ending December 9 : from the manner the number of the store coolies are entered on the distribution-roll it is presumed the entries were not made on different dates from 4th to 9th ; the numbers 2 appear to have been entered at one stretch of the pen.

Distribution-roll, workshop, for the week ending December 17 : 4 labourers at 20 cents altered to 1 in pencil after it was totalled ; 11th, Monday, 2 labourers altered to 1 in pencil after it was totalled.

Distribution-roll, workshop, for the last week of December . 29th and 30th, 3 labourers altered to 4 in pencil ; 27th, 2 labourers altered to 1, 3 to 4, 2 to 3, after it was totalled.

Discrepancies between Distribution Rolls, and Classification of Expenditure as recorded on Check Rolls—the sum shown by letter supported the Debits in the Ledger.

Assessment office improvements, as per distribution-rolls for March, Rs. 96·01 ; check-roll No. 11 shows Rs. 100·81.

Sunshades to windows, Secretary's office : distribution-rolls for March, Rs. 44·10 ; check-roll No. 11 shows Rs. 41·30.

Estimate No. 139—Watering street : distribution-rolls for March, Rs. 104·16 ; check-roll No. 11 shows Rs. 102·89; the difference of Re. 1·27 does not appear to have been debited that month.

Estimate No. 103—Contingencies : distribution-rolls for March, Rs. 6·79 ; check-roll No. 11 shows Rs. 12·30 ; the difference Rs. 5·51 is on account of repairs to wooden bridge, Kanatta, night soil depôt.

As distribution-roll was allotted to estimate No. 75 of 1898, for widening Main street, but was altered to estimate No. 221 of 1898 for building Main street sewer, to agree with the check-roll ; this alteration does not bear the initials of a responsible officer.

Estimate No. 42/7—Repairing Kollupitiya market : check-roll No. 14 for November. Distribution on check-roll shows Rs. 58·30, but distribution-rolls show Rs. 61·30. Two days' attendance of two artificers appear altered on the check-roll after it was totalled up. If the sum of Rs. 61·30 was allowed to remain, the estimate would have been exceeded.

Estimates Nos. 64/29 and 64/31—Urugodawatta road, check-roll No. 6 for November. Neither the check-roll nor the distribution-rolls describe the different sections of the road to distinguish between 64/29 and 64/31. Besides, the amount by distribution-roll is Rs. 233·99, whereas the amounts (101·12 × 104·13) in check-roll aggregate to Rs. 205·25 ; how the difference of Rs. 28·74 was accounted is not understood.

Estimate No. 57/3—Repairing gas testing room, check-roll No. 14 for December, Overseer V. S. Kitchillan ; the expenditure by the distribution-rolls amount to Rs. 24·32, but a sum of Rs. 30·40 was first debited in Ledger and again altered to Rs. 23·84 ; the balance on the estimate only 37 cents.

Estimate No. 72—New road through Silversmith street quarry, check-roll No. 6 for December, Overser A. V. Titus ; the expenditure by the distribution-rolls amounts to Rs. 90·01 ; this amount appears to have been debited in the Ledger and again altered to Rs. 102·38.

Expenditure by Distribution Rolls on Check Roll No. 17 for November.

Estimate No.		Week ending 5th.	Week ending 12th.	Week ending 19th.	Week ending 26th.	Week ending 30th.	Total.
		Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
118-98	Cooly lines, Victoria Park ...	35 86	44 17	48 47	66 28	32 2	226 80
56-2	Repairs, Dematagoda toll house ...	3 15	12 77	—	—	—	15 92
—	Repairs, Welikada toll house ...	—	11 83	—	—	—	11 83
—	Repairs, Wellawatta toll house ...	—	8 24	23 29	24 80	—	56 33
—	Repairs, Bambalapitiya toll house ...	—	0 87	—	—	6 30	7 17
—	Repairs, Narahenpitiya toll house ...	—	—	0 80	—	5 55	6 35
103	Cooly lines. Narahenpitiya toll house ..	—	—	—	45 12*	29 28	74 40
							398 80

* This distribution-roll was not signed by overseer.

Memorandum of Distribution on the back of Check Roll No. 17 for November.

	Rs. c.
1st sheet.—Estimate No. 118/98, Cooly lines, Victoria Park	226 80
2nd sheet.—Estimate No. 192/97, Building market, Bambalapitiya ...	219 23
3rd sheet.—Estimate No. 56/2, Toll House, Dematagoda	15 92
Estimate No. 56/5, Toll house, Welikada	11 83
Estimate No. 56/1, Toll house, Wellawatta	56 33
Estimate No. 56/4, Toll house, Bambalapitiya	7 17
Estimate No. 56/3, Toll house, Narahenpitiya	6 35
4th sheet.—Cooly lines, Narahenpitiya	74 40
	618 3

It would appear from the above statements that there are no distribution-rolls to support the item of Rs. 219·23 for building Bambalapitiya market ; some explanation is necessary.

From the following statements referring to check-roll No. 11 for December, it would appear that the check-roll shows Rs. 59·77 more than the supporting distribution-rolls, and that the expenditure on the following estimates by distribution-rolls do not agree with that by check-roll :—

Estimate No. 103, Cooly lines, Narahenpitiya.	Estimate No 13. Street name boards.
Estimate No. 112, Latrine buckets.	Estimate No. 71, Repair of tools.
Estimate No. 192/2, Drain, Gintupitiya street.	Estimate No. 42/8, Gintupitiya street market.

The expenditure on the following works appearing in the distribution-rolls does not appear in the classification on the check-roll :—

Repairs, Municipal Council workshop.	Repairs, Kotahena fire station.
Repairs, dog catt.	Repairs, Fort cooly lines.
Repairs, Beira latrine.	Repairs, Grandpass market.

Again, the amount charged to building market, Bambalapitiya, in check-roll is not supported by the distribution-rolls.

Expenditure by Distribution Rolls on Check Roll No. 11 for December.

Estimate No.		Week ending 3rd.	Week ending 10th.	Week ending 17th.	Week ending 24th.	Week ending 31st	Total.
		Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
103	Cooly lines, Narahenpitiya	2 81	35 13	66 5	—	—	103 99
—	Road to night-soil depôt, Narahenpitiya ...	5 26	—	—	—	—	5 26
—	Depôt overseer's quarters	17 55	30 70	2 24	—	—	50 52
112	Do.	1 24 5 56	54 78	69 17	184 42	184 89	464 96
82	Victoria park	0 75	—	—	—	—	0 75
42-4	Dean's road market repairs	5 19	—	—	—	—	5 19
80	—	2 50	—	8 25	—	—	10 75
—	Gintupitiya drain, tapping gratings ...	6 5	9 0	—	—	—	15 5
58	Conservancy of Town Hall	1 50	4 50	4 50	—	—	10 50
61	Store coolies	2 0	6 0	6 0	6 0	5 0	25 0
—	Iron gratings, Cheku street	0 70	18 75	—	—	—	19 45
—	Street name boards	0 88	4 50	6 30	—	—	11 68
71	Repairing pickaxes (tools)	4 0	9 84	12 64 2 0 1 50	—	—	29 98
	Repairing roof, Slave Island market ...	2 0	9 75	—	2 64	—	14 39
	Repair to door of Kotahena fire station ...	4 63	—	—	—	—	4 63
	Repair to Fort cooly lines	1 17	—	—	—	—	1 77
	Grandpass market	4 63	—	—	—	—	4 63
	Church street fence	—	21 70	—	—	—	21 70
143	Surveys of Gregory's radiant ...	—	—	6 4	—	—	6 4
	Gintupitiya street market	—	—	1 54	11 0	—	12 54
154	Women's shed, Deans's road market ...	—	—	6 0	—	—	6 0
139	—	—	—	0 88	—	—	0 88
	Repairing water carts	—	—	11 97	—	—	11 97
	Repair Municipal Council workshop ...	—	—	12 65	—	—	12 65
	Repair dog cart	—	—	4 30	—	—	4 30
	Repair Beira latrine	—	—	3 80	—	—	3 80
42-3	Dean's road market	—	—	—	4 63	—	4 63
							862 11

Memorandum of Distribution on back of Check-Roll No. 11 for December.

Estimate No.		Rs.	c.
58	Conservancy of Town Hall	10	50
61	Pay of watchers and coolies	25	0
71	Repairs of tools	20	44
13	House-numbers and street name boards	12	58
80	Dredging lake	10	75
82	Upkeep of Victoria park	0	75
103	Road to night soil depôt, Narahenpitiya	5	26
	Cooly lines, Narahenpitiya	111	87
	Depôt overseer's quarters, Narahenpitiya	50	52
112	Latrine buckets	503	87
139	Watering streets	42	85
143	Surveys and tracings	6	4
213	Repairs to wooden fence, Church street, Fort	21	70
162/97	Building market, Bambalapitiya	25	4
42/3	Dean's road market	9	82
192/2	Drain, Gintupitiya street	16	80
89/98	Gratings and frames, Cheku street	19	45
42/2	Repairing Slave Island market	14	39
42/1	Repair of stalls, Dean's road market	4	63
42/8	Repair of Gintupitiya street market	33	62
154	Shed for basket women, Dean's road market	6	0
	Total ...	921	88

The expenditure on estimates No. 42/4 and 42/3 apparently has been debited to estimate No. 42/3. The amount first debited to estimate No. 112 in Ledger appears to be Rs. 479 odd, whereas the distribution-rolls show only Rs. 464·06, but that is again altered to Rs. 503·87 to agree with the classification on check-roll.

The Financial Assistant and Accountant, Public Works Department, to the Chairman, Municipal Council, Colombo.

Colombo, July 17, 1902.

SIR,—REFERRING to your letter No. 68 of 5th February last to the Director of Public Works, I have the honour to forward the following report on the audit of the accounts of the "Works Department" for the year 1900:—

The Estimate Ledgers, three in number, were checked, and, with the exception of item as per sheet No. 2 annexed, were found to agree with vouchers and check-rolls appertaining to the Works Department.

The Order Books, four in number, were carefully gone through. I annex statements showing irregularities.

Several of the distribution-rolls were examined and checked with the check-rolls connected with them. I annex a statement disclosing the nature of errors discovered.

The expenditure under the several estimates, as recorded in the Ledgers, was found to agree with the Chairman's financial statement for the same year, with the exception of the following:—.

		Superintendent's Ledger. Rs. c.	Chairman's Financial Sheet. Rs. c.
Estimate No. 192/10 of 99	Extensions: St. John's drain through Dam street	5,238 90	5,249 90
Estimate No. 7 ...	Furniture	329 31	338 16
Estimate No. 49 ...	Dematagoda: oil, &c. ...	92 78	104 28
Estimate No. 80 ...	Conservancy of lake ...	179 57	3,079 57
Estimate No. 97 ...	Contingencies: Cemeteries ...	235 48	1,130 48
Estimate No. 107 ...	Contingencies: Health Department	283 90	3,888 58
Estimate No. 112 ...	Maintenance and repairs to camps...	626 81	710 21
Estimate No. 114 ...	Expenses of disinfection ...	50 32	821 38
Estimate No. 117 ...	Scavenging	1,036 25	38,363 28
Estimate No. 142 ...	Miscellaneous	282 75	1,523 92
Estimate No. 12 ...	Capture and destruction of dogs, &c.	110 7	1,497 88
Estimate No. 125 ...	Cost of legal proceedings ...	5 70	430 70
Estimate No. 9 ...	Furniture (Assessment account) ...	15 45	96 47
Estimate No. 20 ...	Miscellaneous do. ...	7 31	323 44

The sum of Rs. 7,948·67 represents the debits recorded in the books of the Superintendent of Works in respect of the deviation of the main road to Uplands; a sum of Rs. 38,000 appears to have been paid in addition for compensation.

The system adopted for the issuing and recording of orders for stores, &c., was practically the same as in 1899, and I would refer you to remarks under this head in my report for 1899.

The method of posting the Estimate Ledgers, checking of orders, distribution-rolls, &c., was also practically the same as in 1899, and I would repeat the remarks made in the report for that year. The posting of the Ledgers was more correct than in 1899, but the checking of orders for stores, &c., before payment was made was again neglected. Erasures and alterations in the distribution-rolls, without the initials of any responsible officer frequently occurred. It is, I maintain, absolutely necessary that such erasures and alterations made in the attendance and in the classifications of accounts should be initialled by the Superintendent or Assistant Superintendent of Works, in order to ensure the correctness of the debits to any particular estimate.

I annex twelve classified statements showing items which are unsatisfactory; the majority of them should be referred to the Works Department for explanation.

I am, &c.,

H. A. MARTIN,
Financial Assistant and Accountant,
Public Works Department.

STATEMENTS REFERRED TO.

1.—*Order apparently paid for Twice.*

Estimate No. 112—Maintenance and repair of camps : order 7 for 200 battalies Re. 1·12 ; first paid to W. A. B. and again to F. G. S. W.

2.—*Debit in the Ledger apparently not supported by Vouchers in File.*

Estimate No. 83—Park, Havelock Town : Government Agent—Royalty on 102 cartloads unscreened gravel Rs. 6·12, voucher quoted (2/199.)

3.—*Materials paid for in excess of Orders.*

Estimate No. 63—General upkeep of roads : order 110 for 1 cube metal, paid for 4·08 cubes.

Estimate No. 73—Repair of tools for other works ; order 21 for 6 lb. nails, paid for 20 lb.

Estimate No. 78—Protection of outlet from lake and of Galle Face beach : order 5 for 900 gunny bags Rs. 36 ; paid for 400 gunny bags Rs. 72 ; order 6 contains an item for 200 gunny bags which does not appear to have been separately paid ; probably the excess of 200 on order 5 is covered by this item ; requires explanation.

Estimate No. 117—Scavenging : order 2 for 10 lb. grease, paid for 14 lb. Rs. 3·50.

Deviation of main road through Uplands : order 17 for 50 cwt. firewood, paid for 100 cwt. Rs. 47.

Estimate No. 201—Repairs, cooly lines, Dematagoda slaughter-house : order 8 for 300 1-ft. jak reepers, paid for 500 1-ft. reepers Rs. 7·95.

Estimate No. 69—Trunk road to Wellawatta : order 2 for 21 cubes sifted earth, paid for 26·4 cubes ; Rs. 16·20 in excess of order.

Estimate No. 69—Trunk road to Wellawatta : order 30 for 200 cwt. firewood, paid for 210 cwt. firewood on estimate No. 169, Trunk road to Wellawatta.

4.—*Where Savings should have been effected.*

Estimate No. 66/5—Gravelling Maliban street, Front street to 4th Cross street : order 2 for 52·40 cubes gravel, only 41·35 cubes debited ; there should have been a saving of Rs. 65·45, but the balance on estimate was only Rs. 16·12.

Estimate No. 66/10—Brassfounder street, Gintunpitiya to Andival street : order 1 for 34·25 cubes gravel ; none debited ; should have been a saving of Rs. 188·37. Estimate shows balance 41 cents.

Estimate No. 66/11—Alutmawata road, Kotahena street to College street : order 1 for 99 cubes gravel, 75·08 cubes debited ; saving should have been about Rs. 130, balance only Rs. 37·87.

Estimate No. 66/13—Gravelling Cemetery road, Wall street to Police Station road : ordered 37·89 cubes, 20·67 charged ; saving should have been about Rs. 94, balance only Rs. 7·88.

Estimate No. 66/23—Gravelling North and South Base Line road : order 1 for 320 cubes gravel, but only 232 supplied at Rs. 4·90 per cube ; saving should have been about Rs. 431·20, but balance was only Rs. 139·94 ; it would also appear that there should have been a saving in the provision for labour ; requires explanation.

Estimate No. 66/27—Gravelling Hunupitiya road, Alston place to Braybrooke street : ordered 74·50 cubes gravel, none debited ; saving should have been Rs. 443, but balance was only Rs. 97·51.

Estimate No. 66/28—Park street, Turret road to Braybrooke street : ordered 114 cubes gravel, none debited ; saving should have been Rs. 678·30, but balance was only Rs. 260·57.

Esttmate No. 66/30—Staples street, Union place to Braybrooke street : ordered 50·40 cubes gravel, none debited ; saving should have been Rs. 297, balance was only Rs. 48·27.

Estimate No. 66/40—Ward place, Union place to Kynsey road : ordered 248·50 cubes gravel, debited 136 ; saving should have been Rs. 532, balance was only Rs. 142·69.

Estimate No. 67/3—Wolfendahl lane : ordered 22·50 cubes metal, none debited ; saving of Rs. 121 should have been effected ; estimate shows a balance of Rs. 62·20.

Estimate No. 65/51—Old Moor street extension : ordered 126 cubes metal, debited only 56 cubes ; a saving of Rs. 700 should have been effected ; estimate shows a balance of only Rs. 493·95.

5.—*Wrong Posting in the Ledger.*

Voucher No. 76/33 (2,042), December, estimate No. 9, Furniture : order 36, 1 pair brass hinges, &c., debited to estimate No. 12 for capture and destructions of dogs, &c.

Voucher No. 73/32 (2,039), December, estimate No. 9, Furniture : order 34, 1 almirah lock, &c., Rs. 10·75, debited to estimate No. 12.

Voucher No. 78/24 (2,043), December, estimate No. 9, Furniture ; order 37, 3 brass almirah locks, Rs. 9·45, debited to estimate No. 12.

Voucher No. 79/34 (2,044), December, estimate No. 107, Contingencies : order 14 :—

	Rs. c.
2⅛ yards galvanized wire netting...	1 87
1 lb. galvanized steel staples	0 55
	2 42

the above were the items to be debited, but another item of 2⅛ yards wire netting Rs. 5·83, was debited in addition to the above estimate. In the same voucher the latter item appears under estimate No. 70, Purchase of tools for roads, and is accordingly debited to the estimate ; hence the item debited to estimate No. 107 is unsupported by voucher.

Statement of expenditure for December, charges Rs. 15·33 to estimate No. 9, Assessment furniture account, but it was debited to estimate No. 12.

6.—*Observations on Distribution Rolls.*

Check-roll No. 3 for January shows distribution of labour irrespective of salary of overseer and pay of firemen Rs. 306·10 ; the distribution-rolls in support of the same add up to Rs. 332·97.

Check-roll No. 4 for January : the total amount of the check-roll agress with the distribution-rolls. The classification in respect to estimate Nos. 63 and 69 disagree : check-roll shows Rs. 170·38 to estimate No. 63 and Rs. 23·50 to estimate No. 69, Trunk road to Wellawatta ; distribution-rolls shows Rs. 181·62 to estimate No. 63, and the balance Rs. 12·26 shown in a separate roll is apparently not classified to any particular estimate.

Check-roll No. 5 for January : the classification on the check-roll shows Rs. 247·62, the distribution-rolls in support total up to Rs. 240·41.

Check-roll No. 14 for January : distribution-rolls seem to have been issued on estimate No. 194 of 1899 for improvement and widening Chatham street, but altered in pencil to estimate No. 206/98, Footway, Chatham street ; alterations not initialled by any responsible officer.

Distribution-roll for Rs. 70·34 for week ending January 28 on estimate No. 72 shows alterations made in pencil after it was totalled up ; no initials.

Check-roll No. 18 for January : I notice that some of the distribution-rolls in support of this check-roll were not kept in the recognized printed form, ordinary foolscap paper being substituted.

Check-roll No. 14 for February : distribution-rolls for Rs. 97·40 and Rs. 74·37 for week ending 18th February, appear to have been altered after they were totalled ; the alterations were not initialled by any one. If the alterations were not made, the totals of the distribution-rolls would have been less than the check-roll.

Check-roll No. 11 for March : memorandum on check-roll shows that the sum of Rs. 6·90 was charged to estimate No. 143 for improvement to shroff's office, but the distribution-rolls for the work total up to Rs. 22·58 ; the balance Rs. 15·68 was charged to estimate No. 190 for painting Municipal Court-house ; the balance to credit of the former estimate on that date was only Rs. 7·23.

Check-roll No. 14 for March : distribution-rolls on estimate No. 77 for the first and third weeks bear traces of alterations having been made to agree with the check-roll ; the alterations were made in pencil after the distribution-rolls were totalled up in ink ; no initials of any responsible officer support the alterations.

Check-roll No. 11 for April : memorandum on check-roll shows that a sum of Rs. 44·53 was charged to estimate No. 213 of 1899 for repairs to wooden fence, Church street ; the distribution-rolls show that labour to the value of Rs. 58·08 was performed during the month ; the difference Rs. 13·55 was debited to estimate No. 179 for making a boiler to disinfector, as the former estimate was only in credit on that date by a sum of Rs. 44·70. The total amount of the check-roll is Rs. 863·29, but the distribution-rolls total up to Rs. 861·29.

Check-roll No. 14 for April : the total amount of the check-roll is Rs. 1,391·74, distribution-rolls total up to Rs. 1,376·78, a difference of Rs. 14·96 not supported by distribution-rolls. Distribution-rolls on estimate for painting Municipal Court-house amount to Rs. 44·38, but Rs. 58·86 was charged by memorandum on back of check-roll.

Check-roll No. 14 for May : distribution-rolls used for estimate No. 192/2 of 1899 for drain, Gintupitiya street, amount to Rs. 74·66, but only Rs. 59·88 was charged to above estimate, the balance Rs. 14·78 being charged to estimate 192/10 for extension of St. John's main drain, apparently owing to the balance of the former being insufficient, the balance on the estimate at that date being only Rs. 61·09.

Check-roll No. 5 for July : check-roll totals up to Rs. 450·40 ; distribution-rolls, exclusive of Rs. 50 salary of overseer, amount to Rs. 393·72, a difference of Rs. 6·68.

Check-roll No. 14 for July : I notice that two distribution-rolls were kept for estimate No. 167 for shed for basket women, Dean's road market, throughout the month, each being separately totalled. The artificers and coolies entered on the second one amounting to Rs. 132·60 could have been included in one each week as the form allowed sufficient space ; the circumstances that led to two being kept should be explained. I notice that the one amounting to Rs. 132·60 was altogether kept in blue ink and the other in black by Overseer Kitchilan ; blue ink was usually used by him for signing, totalling, &c., distribution-rolls and check-rolls. It appears strange that the sum of Rs. 132·60 charged to Estimate No. 167 was separately shown on sheet No. 4 of the check-roll as labour performed for Maligakanda wall (estimate No. 200 of 1899) ; this was altered by the Chief Clerk on 28th November, on estimate No. 167, Shed for basket women, Dean's road market. It is consequently not understood how the overseer, who also kept the second set of distribution-rolls for "Shed for basket women, Dean's road market," entered in the supporting check-roll "Maligakanda wall." It appears to me that the work done on estimate No. 200 of 1899 was charged to estimate No. 167 as there was not sufficient balance on the former, the balance on that date being only Rs. 66·28, and the second set of distribution-rolls headed against estimate No. 167 substituted for those on estimate No. 200 of 1899.

Check-roll No. 14 for August : sheet No. 3 and supporting distribution-rolls for week ending 31st on estimate No. 172, Altering drain, Campbell's park, bear traces of alterations ; attendance of labourers reduced apparently because the balance on the estimate was insufficient, there being only Rs. 104·98.

Check-roll No. 4 for October consists of two sheets amounting to Rs. 470·89 the distribution-rolls total up to Rs. 372·81. No distribution-rolls appear to have been filed for estimate No. 83, Park, Havelock Town, to which a sum of Rs. 90·07 was charged.

Check-roll No. 6 for October : the total amount, inclusive of salaries of overseers, is 528·15, but the distribution-rolls (which do not include salary of overseers) total up to Rs. 529·31 ; one distribution-roll for the first week, which was recorded in ink and signed by Overseer Titus, has been crossed in pencil and apparently treated as cancelled ; the apparent cancellation does not bear the signature of any responsible officer.

Check-roll No. 11 for October : two distribution-rolls appear to have been kept for the first week for estimate Nos. 188, Repairs to Church street fence.

Check-roll No. 2 for November consists of three sheets ; the third is for Rs. 5·28, for which no distribution-rolls seem to have been kept ; the above amount was debited to estimate for removing boilers from the railway yard to Hutson's mills (Deposit Account.)

Check-roll No. 11 for November shows Rs. 11·02 charged to estimate No. 73 instead of to 74. Estimate No. 74, Repairs to steam rollers, was especially sanctioned for Rs. 300, and before the end of June there was only a balance of Re. 1·20. One of the distribution-rolls for week ending 25th was not signed by the overseer in charge of the workshop nor any officer of the Municipality. One or two of the distribution-rolls bear evidence of erasures which affect the particulars of work for which labour has been charged. All the distribution-rolls of the above check-roll for the week ending 30th were not signed by overseer in charge or by any officer of the Municipality.

Check-roll No. 14 for November : the total amount of the check-roll is Rs. 1,810·64, the distribution-rolls total up to Rs. 1,644·17 ; the difference is Rs. 166·47 ; apparently distribution-rolls for estimate No. 192/11 of 1899 for drainage, Sea street, are not in file.

Check-roll No. 5 for December : distribution-roll for Rs. 155·95 bears traces of alterations ; Rs. 2·75 was increased to Rs. 6·75.

Check-roll No. 11 for December : distribution-roll for Rs. 76·88 for week ending 22nd December was partly kept in pencil and ink ; the pencil figures seem to have been inserted after the distribution-roll had been totalled in ink ; the pencil insertion is not initialled by any responsible officer.

Check-roll No. 14 for December : distribution-roll for Rs. 5·63 on estimate No. 208 was not signed by head overseer or overseer.

Check-rolls total up to Rs. 1,788·56, but the distribution-rolls to Rs. 1,692·76, a difference of Rs. 95·80 ; Estimate No. 192/11 has Rs. 106 charged by memorandum on back of check-roll, but distribution-roll on that particular estimate amounts to only Rs. 21·20 ; estimate No. 198 has Rs. 42·50 charged, but distribution-rolls total up to Rs. 31·50 ; it appears, from a note in file that distribution-rolls on this estimate from 10th to 16th December were forwarded to Auditor-General.

7.—*Items debited in Ledger, but not supported by Order Book.*

Estimate No. 72—Repair of tools for roads : order 17, 1 gallon kerosine oil, 90 cents.
Estimate No. 81—Dredging St. Sebastian canal : order 3, 100 cwt. firewood, Rs. 47.
Estimate No. 97—Contingencies, Cemeteries : order 2,314, 1 lb. green wall tinting powder, Re. 1·13.
Estimate No. 65/6—Metalling Skinner's road north : 2 gallons oil, Rs. 4·52.
Estimate No. 65/3—Metalling Blomendahl street : 1 gallon castor oil, Re. 1·88 is debited. The number of order allotted to it is No. 3, on the C. C. C., but 3 appears to have been issued to the C. G. T. & Co., for 2 gallons cocoanut oil.
Estimate No. 112—Maintenance and repair of camps : orders 1, 4, 5, 6, and 7.
Estimate No. 179—New boiler to disinfector : 4 lb. galvanized rivets, Rs. 2.
Estimate No. 59/2—Painting Guides' shelter : order 3, ½ gallon copal varnish, Rs. 4·75.
Estimate No. 188—Railing Church street : order 1, 22½ lb. round iron, Re. 1·80.
Estimate No. 58/1—Urugodawatta toll house : order 3, 1 gallon tar, 50 cents.
Estimate No. 58/2—Repairs, Bambalapitiya toll house : order 6, 1 barrel cement, Rs. 10·75.
Estimate No. 45/9—Repairs to Dean's road market : order 12, 1 galvanized sheet, Rs. 6.

Estimate No. 69—Trunk road to Wellawatta :—

	Rs. c.
Order 13 :—	
2 lb. bar soap	0 46
Order 12 :—	
2 lb. washing soda	0 28
1 bathbrick	0 14
4 lb. red lead powder	1 44
1 paint brush	0 68
14 lb. cotton waste	2 80
6 sheets emery cloth	0 40
	5 74

Estimate No. 69—Trunk road to Grandpass : order 3 ; 2 gallons cocoanut oil, Rs. 2·68.
Estimate No. 189—Side rails, Urugodawatta bridge ; this estimate does not appear in the order books.
Estimate No. 196—Improvements to Dean's road Market : Order 116, 1,000 standard bricks, Rs. 19.

8.—*Orders ordered on one Estimate and debited to another.*

Estimate No. 12—Capture and destruction of dogs, and for dog collars.
Order 4, 20 lb. ¾ ft. rod iron, Rs. 2·59, debited to estimate No. 9, Assessment account, Furniture ; voucher states estimate 12.
Estimate No. 7—Furniture :

	Rs. c.
Order 34 :—	
1 brass almirah lock	2 70
3 brass drawer locks	7 50
3 brass escutcheons	0 51
6 screws	0 4
	10 75
Order 36 :—	
1 pair brass bolt hinges	0 72
1 dozen brass screws	0 16
1 brass box lock	2 70
	3 58

Order 37, 3 brass almirah locks, Rs. 9·45, debited to estimate No. 12, Capture and destruction of dogs, &c., but voucher states estimate No. 9, Furniture.
Estimate No. 217—Cooly lines, Victoria park : order 10, 1 gallon castor oil, Re. 1·88, debitted to estimate No. 82, Dredging lake.
Estimate No. 147—Urgent repairs and works :—

	Rs. c.
Order :—	
130, 7 lb. nails	0 81
136, 1 hora plank	1 94
137, 3 lb. nails	0 35

debited to estimate No. 82, Dredging lake.
Estimate No. 147—Urgent repairs and works ; order 112, 15 bushels lime, Rs. 4·20, debited to Estimate No. 85, Upkeep of Racquet Court.
Estimate No. 192/10 of 1899—Extension of St. John's main drain.
Order 5, 10 hora planks, Rs. 12.
Order 6, 7 lb. nails, 81 cents, debited to estimate No. 182/9 of 1896, Improvement of Old Moor street.
Estimate No. 79—Filling lake, Union place : order 11, 1 gallon cocoanut oil, Re. 1·34, debited to estimate No. 81/99, Filling lake, Union place.
Estimate No. 45/3—Repairs to Dean's road market : order 12, 1 galvanized sheet, Rs. 6, debited to estimate No. 218, Cleaning and white and colour washing, Municipal Office.
Estimate No. 147—Urgent repairs and works : order 134, 100 standard bricks, Re. 1·90, debited to estimate No. 118/4, Cramer's lane latrine.
Estimate No. 147—Urgent repairs and works : order 117, 20 bushels lime, Rs. 5·60, debited to estimate No. 208 Wall, Maligakanda park.
The following orders ordered on estimate No. 69, Trunk road to Wellawatta, appear debited to estimate No. 169, Trunk road to Wellawatta, 31, 32, 33, and 34.
Certain orders ordered on estimate No. 69, Trunk road to Kotte, appear debited to estimate No. 169 for the same service.

9.—*Orders which appear in Order Book, but not debited in Ledger.*

Estimate No. 66/31—5, 6 gallons castor oil.
Estimate No. 7—Furniture : 9, 38.
Estimate No. 63—General upkeep of roads : store order for ½ barrel cement, 35, 42, 51, 63, 68, 76, 93, 95, 96, 97 (6 cubes unpaid), 102, 104, 113, 115, 116, 121, 125, 126, 129, 131, 138, 140.
Estimate No. 64—Lighting heaps, Rs. 6:10.
Estimate No. 70—Purchase of tools for roads, 20, 26, 29, 37, 40.
Estimate No. 71—Purchase of tools for other works, 2, 19, 20.
Estimate No. 72—Repair of tools for roads, 12.
Estimate No. 73—Repair of tools for other works, 6, store order 1 gallon machine oil, 24, 14 lb. nails, 29.
Estimate No. 77—Conservancy of sewers and drains, 4, 5.
Estimate No. 78—Protection of outlet from lake, &c., 12, 62.
Estimate No. 79—Filling lake, Union place, 2, 8, 12, 36.
Estimate No. 82—Dredging lake, 21, store order for 2½ gallon machine oil, 27.
Estimate No. 100—Pay of firemen and coolies, 2, 37.
Estimate No. 142—Miscellaneous, 25.
Estimate No. 143—Improvements to Shroff's Office, 1.
Estimate No. 147—Urgent repairs and works, 4, 6, 69, 75, 76, 111, 116, 119, 131, 132, 135, and several store orders for cement and one for 4 E. W. pipes.
Estimate No. 146—Watering streets, 12.
Estimate No. 157—Repairs, Hendala jetty, 5.
Estimate No. 192/10 of 1899—Extension of St. John's main drain, 21.
Estimate No. 192/9 of 1899—Improvement of Old Moor street, 2, 10, 13.
Estimate No. 107—Contingencies, 6, 12. 15.

Estimate No. 160/1—Side drain, Chapel place, 3.
Estimate No. 72 of 1899—New road through Silversmith street quarry, 13.
Estimate No. 295 of 1877—Wall, Maligakanda Recreation ground, 13.
Estimate No. 194—Punkah for Secretary's Office, 2.
Estimate No. 75—Improvements to Parson's road, 2, 20.
Estimate No. 201—Repairs, cooly lines, Dematagoda slaughter-house, 500 half-round tiles.
Estimate No. 177—Repairs to water closet, &c., Cemetery-keeper's quarters, Madampitiya, store order ½ barrel cement.
Estimate No. 192/11 of 1899—Improvement and drainage, Sea street, 3, 50 bushels lime.
Estimate No. 193—George Wall Memorial Fountain, 3, 10.
Estimate No. 170—Repairs to approach roads, Bambalapitiya, Kollupitiya, Slave Island Railway Stations, 2.
Estimate No. 45/5—Repair of Gintupitiya street market, 3.
Estimate No. 188 of 1899—Cost of dust boxes, 1.
Estimate No. 45/3—Repairs, Dean's road market, store order 300 half-round tiles.
Estimate No. 220—Iron water carts, 2, 4.
Estimate No. 58/3—Dematagoda toll house, store order 100 half-round tiles, 1 bushel lime.
Estimate No. 58/4—Welikada toll house, 3, store order 100 half-round tiles.
Estimate No. 58/5—Lock-gate toll house, store order 25 half-round tiles.
Estimate No. 58/7—Wellawatta toll house, store order 200 half-round tiles.
Estimate No. 59/3—Gas testing room, store order 400 half-round tiles.
Estimate No. 99B.—Fire engine shed at St. Sebastian, Store order 200 half-round tiles.
Estimate No. 99A—Fire engine shed, cooly lines, Kotahena, 3, 4, store order 200 half-round tiles.
Estimate No. 45/9—Repairs to Dean's road market, 8.
Estimate No. 59/6—Repairs, Municipal workshop, 5.
Estimate No. 208—Wall, Maligakanda park, 8, 10.
Estimate No. 163/99—Improvements, Maradana Terminus, 2.
Estimate No. 176—Footway, Maligakanda recreation ground quarry, ½ cube metal.
Estimate No. 205—Repairs to drain, St. Lucia's street, 1, 3.
Estimate No. 209—Repairs to Sexton's quarters, Kanatta, 4, store order 1,000 half-round tiles.
Estimate No. 112—Plague camp, 241/0B·2, 2.
Estimate No. 69—Trunk road to Wellawatta, 35.
Estimate No. 69—Trunk road to Grandpass, 10, 17, 32.
Estimate No. 118/5—Huftsdorp latrine, 2.
Estimate No. 118/7—Gasworks street latrine, 1.
Estimate No. 118/8—St. John's latrine, 1.
Estimate No. 118/10—Beira latrine, 2.
Estimate No. 69—Town Hall to Mattakkuliya, 6, 7, 12.

10.—*Deposit Accounts.*

The sums of Rs. 6 and Rs. 23·30 shown in abstract statement of expenditure for February do not appear to have been debited to the advance accounts in the Deposit Ledger. The former was on account of road scrapings to Mr. Ferguson and the latter for cutting a bo-tree in Front street.

Voucher 1,609 (1/199) for November: Rs. 49·80 was paid to the Government Agent, Western Province, for royalty for 830 cartloads of gravel removed from Eladuwa to Torrington place. This does not appear debited in the Deposit Ledger; explanation is required whether this was paid on behalf of a metal contractor.

11.—*Materials supplied from Store.* (*Estimates being debited with their Value corresponding Credits should appear in the Revenue Account.*)

Estimate No. 65/16—Metalling 2nd Cross street, Bankshall street to Norris road. Letter No. 778 of October 10 1900, to Chairman: 125 cwt. firewood, Rs. 58·75.

Estimate No. 65/22—St. John's road, Main street to Seabeach road. Letter No. 709 of September 9, 1900, to Chairman: 60 cwt. firewood, Rs. 28·80.

Estimate No. 196 of 1899—Bridge, Washers' lane. Letter No. 187 of March 24, 1900, to Chairman: half barrel cement Rs. 5·56.

Estimate No. 201—Repairs to cooly lines, Dematagoda slaughter-house. Letter No. 764 of October 5, 1900, 500 half-round tiles, Rs. 8·50.

Estimate 147—Urgent repairs and works. Letter No. 764 of October 5, 1900, 85 half-round tiles, Re. 1·45.

12.—*General.*

Estimate No. 63—General upkeep of roads: order 42 is for ½ cube metal, order 43 for 1 cube metal; again order 42 follows for 2 cubes and ½ cube; order 6 for 2 cubes metal is repeated after order 79; this number was already entered in its proper order for 5 cubes of metal. Order No. 6 is repeated a third time after order 82 for 4 cubes metal; order 92 appears to have been entered first for 2 cubes metal, and apparently later on 1 cube additional was inserted between the lines in red and 3 cubes paid for; order 101 is recorded as cancelled, but supports payment for 1·47 cubes metal, Rs. 14·70.

Estimate No. 71—Purchase of tools for other works: order 12 for 2 edging irons, Rs. 6·76, comes between orders 7 and 8, a second No. 12 for 1 stock and die follows No. 11; requires explanation.

Estimate No. 72—Repair of tools for roads: order 2,305 comes between orders 4 and 5; requires explanation.

Estimate No. 73—Repair of tools for other works: order 24 is repeated after 25 for 1 ball cotton; requires explanation.

Estimate No. 77—Conservancy of sewers and drains: orders 1, 2, and 3 are marked as transferred to estimate No. 80, Conservancy of lake, to which they were debited; the authority for such transfers not initialled by any responsible officer, and a doubt arises "which would be the correct estimate to debit."

Estimate No. 78—Protection of outlet from lake, &c.: after order 36 No. 59 follows, the intervening numbers apparently not registered.

Estimate No. 82—Dredging lake: order 36 for 15 and 17 pieces teak (Rs. 204·65) is entered after order 88; requires explanation.

Estimate No. 97—Contingencies, Cemeteries: order 2,315 recorded between orders 10 and 11.

Estimate No. 147—Urgent repairs and works: order 4 for 2 barrels cement is repeated after order 30, the first order 4 is for bricks and is registered after No. 3; order 41 for 18 hora planks Rs. 5·76, order 42 for 3 lb. wire nails, &c., and order 47 are marked cancelled, but paid for; order No. 1 appears a second time after 69; order No. 1 for the third time and No. 2 for the second time appear registered after order 72; requires explanation.

Estimate No. 146—Watering streets: order 2 is for 14 lb. pitch Re. 1·68, but 8 lb. solder, Rs. 4·40 is paid for in addition; this item appears to have been inserted afterwards between the lines; order No. 1 appears a second time after 7 and third time after 25.

Estimate No. 81 of 1899—Filling lake, Union place: the following is the order that the numbers in the Order Book assume:—5, 2, 8, 1, 2; requires explanation.

Estimate No. 59/6—Repairs to Municipal workshop: order 7 is for 10 lb. nails, but 56 lb. putty, Rs. 6·72, is paid for in addition; this item was inserted after No. 8; requires explanation.

Estimate No. 69—Trunk road, Fort to Grandpass: the total quantity of metal ordered by order 1 amounts to 350·28 cubes, but the quantity paid for amounts to 405·28; apparently 55 cubes metal have been paid for in excess of order; requires explanation. All orders marked 2 in the Ledgers for firewood and paid for amount to 559 cwt., but the orders whose numbers are not quoted (6, 12, 13, 14, 16) amount to 491 cwt.; apparently 68 cwt. have been paid for in excess; see Order Book No. 3.

Estimate No. 69.—Trunk road to Wellawatta: Grandpass and to Kotte appear entered over again in Order Book No. 4.

Estimate No. 63.—General upkeep of roads: N. Muttucaruppan, 12 cubes gravel, were supplied, 8 were charged at the rate of Rs. 5 per cube and 4 at Rs. 5·50, voucher 4/95 February; requires explanation.

Estimate No. 69.—Trunk road to Wellawatta: voucher 10/160, 28 cubes of metal at 9·50 per cube, Rs. 266; the entry made in the Ledger reads "28 cubes metal *less 12 cubes for short piling* Rs. 266"; apparently the value of 12 cubes was not deducted from amount paid to Assan Mahamadu (page 38 of Ledger 1).

The dates of payment are not inserted on the following vouchers:—5/130, 6/130, 7/130, 8/131, 11/132, &c., July.

Estimate 63.—General upkeep of roads: voucher No. 32/102, 1 cube metal paid for and debited; voucher states that it was ordered by order No. 104, but the Order Book does not record that such an order was issued; requires explanation.

Check-roll No. 4 for February: Watcher Ramasamy appears to have been entered on the check-roll at the end of the month, as his attendance on 26, 27, 28 is inserted below the initials of the overseer; requires explanation.

Check-roll No. 14 for April: sheet No. 5 not certified by the Superintendent of Works.

Check-roll No. 6 for June: Estimate No. 65/40 is stated to be Serpentine road, should be 65/50; abstracted on the statement correctly.

Check-roll No. 16 for June: sheet No. 3 appears to have been issued on the 8th June, 1900, but attendance of labourers are marked from the 1st; requires explanation.

Check-roll No. 5 for July: there are two sheets, the first issued on 29th June and the second on the 6th July, but the attendance of labourers on the 5th was marked on the latter, attendance in the first sheet was daily totalled and initialled by the overseer, but was not brought forward in the second sheet, which is totalled separately.

Check-roll No. 14 for December: sheets 7 and 8 do not bear the stamp or date of issue.

Check-roll No. 16 for December: sheets 1 and 3, several alterations reducing attendance appear to have been made without the initials of any responsible officer.

Check-roll No. 11 for March: abstract shows Rs. 52·80 against estimate Nos. 73, Repair of tools for other works but only Rs. 12·13 was debited, the balance Rs. 40·67, was debited to estimate, Repairs to steam rollers. As the distribution-rolls support this, the memorandum on the back of check-roll and statement of expenditure should be altered.

Estimate No. 72 of 1899—New road through Silversmith street quarry: discloses that metal to the value of Rs. 982·50 has been credited to this estimate; from the nature of the credit it would appear that the labour in connection with the breaking of the metal was debited to the estimate; this, I would point out, is irregular, and tends to make the debit figures of the estimate incorrect. Transactions of this nature should be worked through an advance account.

Estimate No. 196 of 1899—Bridge, Washers' lane: at the end of March the estimate disclosed only a balance of Rs. 491: workshop distribution-roll for the first week in March shows labour performed on account of the estimate to the extent of Rs. 12·95; in April when this amount was paid it was debited to estimate No. 447, Urgent repairs.

Check-roll No. 11 for October: sheet No. 3 does not seem to have been stamped or signed when issued out.

Check-roll No. 2 for November: the expenditure of sheet No. 2 amounts to Rs. 508·39; this sum is debited to the estimates concerned, but check-roll is not signed by the Superintendent of Works.

Check-roll No. 18 for December was issued without being stamped or signed by some responsible officer.

Check-roll No. 15 for March: a sum of Rs. 227·76 was first abstracted in the monthly statement of expenditure against estimate No. 162/97, Market, Bambalapitiya, and altered to estimate No. 78, Protection of outlet from lake end of Galle Face. In the cash account rendered to the Chairman the above sum was charged to the former estimate and was transferred some time after to estimate No. 78 as required by Superintendent of Works. As the distribution roll in the file shows that the expenditure was incurred on account of estimate No. 78, the circumstances led, at the outset, to the charging of the sum to estimate No. 162/97; should be explained.

AUDITOR-GENERAL'S REPORT FOR 1900.

The importance of the Superintendent of Works verifying check-rolls on the occasion of his visits to working parties has not yet been recognized by that officer, although the subject has been adverted to in successive annual reports.

Several Completion Reports and Estimates of 1900 are still outstanding, and the Chairman's attention has been called to the matter. As an instance, it may be mentioned that estimate No 75, Improvement to Parsons road, on which expenditure had been incurred since August, 1900. has not yet been furnished to Audit.

REPORT on the Audit of the Accounts of the Colombo Municipality for the Year 1901, submitted in compliance with the provisions of Section 119 of the Ordinance No. 7 of 1887.

SEVERAL erasures and alterations have been discovered in the check-rolls of 1901, to which exception has been taken by Audit. The alterations for the most part refer to "X" marks in check-rolls being subsequently altered to "O" and *vice versâ*. In reply to a remark raised by Audit on the subject the Chairman stated that the officer responsible for these alterations has been warned not to do so again. It is in the highest degree undesirable that facilities should be afforded for alterations in check-rolls. Such alterations are now referred to the Superintendent of Works for explanation, and his initials obtained thereto in proof of their *bonâ fide* character.

The importance of check-rolls being verified by the Superintendent of Works on the occasion of his visits to working parties is a subject that has been adverted to in successive annual reports, and despite this fact the check-rolls bear no evidence that this is done. The resolution of Standing Committee dated 26th July, 1889, also makes this duty incumbent on the part of the Superintendent of Works, and it is important, therefore, that the requirements of the resolution should be complied with by that officer.

The following supplemental provision was sanctioned by Council during the year to meet excess of expenditure on the votes allowed in the Budget of 1901, viz. :—

Vote. No.			Rs.	c.
8	...	Miscellaneous uniform	60	0
112	...	Repair of night soil carts	5,000	0
129	...	Cost in legal proceedings	700	0
148	...	Watering streets	4,000	0
6	...	Stationery	270	0
9	...	Commission (Commutation)	4,000	0
67	...	General upkeep of roads	3,000	0
68	...	Lighting heaps	400	0
79	...	Repairs, Dean's road—paved footways	716	0
104	...	Salaries, wages, &c., Health Department	6,500	0
115	...	Maintenance of roads at depôts, Health Department ...	422	37
156	...	Setting back boundary wall, Malay street	260	0
12	...	Capture and destruction of dogs and for dog collars ...	200	0
14	...	Commission, vehicles and animals	400	0
32	...	Dean's road market, lighting	350	0
50	...	Dematagoda lighting	300	0
74	...	Purchase of tools for roads	400	0
75	...	Purchase of tools for other works	100	0
76	...	Repairs of tools for roads	200	0
107	...	Purchase of stationery, Health Department	25	0

No additional provision, however, appears to have been necessary under the following votes as the original votes had not been exceeded, viz.:—

Vote No.			Amount provided. Rs.	c.		Amount spent. Rs.	c.
156	...	Setting back boundary wall, Malay street ...	1,350	0	...	1,342	14
75	...	Purchase of tools for other works ...	500	0	...	451	89

The following votes are included in the Supplemental Budgets Nos. 4 and 5, sanctioned by Council on 17th October and 13th December, respectively, viz.:—

Vote No.			Rs.	c.
162	...	Repair of Edinburgh meat market	42	0
206	...	Drainage of section, Kollupitiya road	500	0
250	...	Additional accommodation for workshop	314	0
211 of 1900		Coir dust shed for public latrines	87	51

but no supplemental provision appears to have been necessary in respect of the above estimates, as the original votes included in the Supplemental Budgets sanctioned previously had not been exceeded.

The following amounts voted in the Supplemental Budgets during the year 1901 have not been availed of, viz.:—

Vote No.			Rs.	c.
178	...	Water service to Mohammedan meat market	75	0
189	...	Slave Island market: converting meat stalls into fish stalls ...	200	0
229	...	Locked mutton stalls, Kollupitiya market	474	0
258	...	Repair of fish benches, Dean's road market	62	0
259	...	Repair of Kollupitiya market	76	80
231	...	Rebuilding culvert, 3rd division, Maradana	259	0
250	...	Road to Captain's Garden	2,255	0
261	...	Repairs to Cross road from Cemetery street to Burial ground, Kotahena	100	0
198	...	Improvement of drainage, Sea street (balance)	467	99
199	...	Paving and cementing drain, Santiago street	93	0
201	...	Gullies, &c., Prince street, Fort	300	0
262	...	Rebuilding drain, opposite No. 6, Panchikawatta... ...	155	0
238	...	Castiron seats, Havelock Town park	482	0
264	...	Repairs to Wall, Kanatta cemetery	246	0
308	...	Fire Brigade (first cost of buildings and appliances) ...	32,607	50
241	...	Purchase of hoses for manual fire engines	1,477	0
242	...	Repair of cattle sheds, night soil depôt	145	0
213	...	Coir, shed, Glenie street latrine	94	0
214	...	Cost of photograph of the Reading of the Proclamation of the Accession of King Edward VII.	270	0
222	...	Assistant Supervisor, Vehicles and Animals Department, July to December, at Rs. 25 per month	150	0
265	...	Gratuity to M. E. Silva, peon	65	0
185	...	Extra clerk, Works Department, 2 months at Rs. 30 per month ...	60	0
228	...	Cart for removal of deceased cattle	500	0
251	...	New iron safe, Superintendent of Works Department ...	300	0
253	...	Improvements to Guides' shelter	240	0
257	...	Fixing water indicators	106	0
268	...	Filling pit near 58, Blomendahl street	122	50

Estimate No.		*Re-votes.*	Rs.	c.
125 of 1898	...	Office lychgate and waiting room, Kanatta cemetery ...	4,000	0
33 of 1899	...	Dean's road market, extension of lighting	556	94
137 of 1899	...	Purchase of bookcase	300	0
65/27 of 1900	...	Metalling Beach road	74	82
65/28 of 1900	...	Metalling Cheku street	111	97
66/28 of 1900	...	Gravelling Park street	260	57
76 of 1900	...	Drainage scheme, Maradana district	15,000	0
163 of 1900	...	Cleaning and painting Edinburgh meat market	1,382	0
167 of 1900	...	Alteration of shed for basket women, Dean's road market ...	113	87
169 of 1900	...	Trunk road to Mattakkuliya	452	33
195 of 1900	...	House connections with sewers	500	0
199 of 1900	...	Alteration of lighting to Bambalapitiya market	170	0

The following votes included in the Budget of 1901 were not availed of during the year, viz.:—

Vote No.			Rs.	c.
11	...	Commission on dog tax	100	0
27	...	St. John's market, vegetable trays	215	0
63	...	Repairs:— Rs. c.		
	...	Gas testing room 68 0		
	...	Printing office 69 0		
	...	Municipal stores 139 0		
	...	Municipal workshop 378 0		
	...	Flushing tank 15 0		
			669	0
72	...	Upkeep of footways	500	0
114	...	Petty expenses, Health Department	1,000	0
119	...	Cost of disinfectants (Sanitary account)	500	0
120	...	Repairs to ambulance carts (Sanitary account)	230	0
127	...	Expenses by Government Agent, on account cart and boat licenses	200	0
130	...	Rent of site, Grandpass latrine	10	0
138	...	Refund of guides' license fees	12	0
139	...	Refund of value of grazing tickets	10	0
157	...	Laying gas pipes and fitting lamp, guides' shelter ...	133	62
158	...	Acquisition of land for reclamation of lake at Vauxhall ...	600	0

UNDER SUB-ESTIMATES.

Estimate No. 69, Metal Roads.

Estimate No.			Rs.	c
20	...	Gasworks street from Main street to Norris road	1,296	87
41	...	Symond's road from Maradana road to Dean's road	533	76

Estimate No. 70, Gravel Roads.

29	...	Reservoir road from Dematagoda road to reservoir	138	0
31	...	School lane from Dematagoda Hill to railway line	151	80
39	...	Lillie street from Union place to the Grange	100	80

Estimate No. 71, Upkeep of Lanes.

1	...	Baptist Chapel lane	44	64
2	...	Cafferman's lane	74	40
7	...	Drieberg's lane	29	70
9	...	Barrack lane	61	99

Estimate No. 72, Upkeep of Footways.

1	...	Queen street footway	133	0
2	...	York street footway	94	50
3	...	St. John's road footway	37	50
4	...	Gintupitiya street footway	191	40
5	...	Dam street footway	24	75
6	...	Ambalama road footway	17	69

Estimate No. 102, Repairs to Fire Stations.

4	...	Repairs, fire station, Kotahena	87	80
6	...	Taking down St. Sebastian fire station	100	0

Estimate No. 46, Repairs of Markets.

2	...	St. John's market	75	0
4	...	Gintupitiya street market	805	0
5	...	Grandpass market	202	0
7	...	Bambalapitiya market	202	0
8	...	Slave Island market	586	0

Estimate No. 122, Repairs of Latrines.

3	...	Repairs to two seats, Glenie street latrine	21	0
4	...	Modara latrine	33	0
5	...	St. Thomas's latrine	62	70
6	...	St. John's latrine	79	0
7	...	Fort latrine	27	50
8	...	Beira latrine	67	0
9	...	Hulftsdorp latrine	11	0
10	...	Kew latrine	17	0
12	...	Dean's passage latrine	34	0
14	...	Cramer's lane latrine	33	0

Financial Assistant and Accountant, Public Works Department, to the Chairman, Municipal Council, Colombo.

Colombo, November 12, 1902.

Special Audit Accounts, Works Department, Colombo Municipality.

SIR,—I HAVE the honour to submit for your information the following report on the Audit of the accounts and books of the Works Department for the year 1901:—

1. The Estimate Ledgers, three in number, were, on the whole, better kept than in the two previous years; the total expenditure recorded by them from postings supported by certified vouchers, check-rolls, and other documents amount to Rs. 288,449·55, and agree (with the exception of the

under-mentioned estimates) with the Financial Detailed Statement, as published by you for the same year :—

Estimate No.			Chairman's Financial Statement. Rs. c.		Works Department. Rs. c.
6	...	Stationery	2,752 55	...	179 28
7	...	Furniture	309 98	...	176 98
12	...	Capture, &c., of dogs	1,344 60	...	93 50
84	...	Conservancy of lake	2,098 29	...	68 29
106	...	Purchase of tools	105 45	...	14 25
112	...	Repair of carts	9,435 88	...	9,358 78
115	...	Maintenance of roads at depôt	1,243 15	...	943 40
116	...	Maintenance and repairs of camps ...	398 44	...	77 44
117	...	Prevention of infectious diseases ...	3,838 43	...	417 39
118	...	Expenses of disinfection	713 83	...	48 0
121	...	Scavenging	33,520 68	...	172 69
145	...	Miscellaneous	1,181 18	...	199 92
215	...	Reception of Their Royal Highnesses the Duke and Duchess of York	2,569 31	...	3 75

There was one instance in which two vouchers for the sum of Rs. 320·80 were twice certified to, passed, and paid for, but only once debited in the Ledgers (see vouchers Nos. 635, 638, 1,045, and 1,046). The transactions were, however, correctly recorded in the books kept by the Secretary, where two debits appear and one credit.

2. The Order and Balance Books, eight in number, were kept on the same unreliable principle as those of the two previous years, with the addition of complicated innovations, which tend in every way to retard what ought to be an easy audit. In several instances orders bearing numbers 1 to 4 appear recorded after those of a higher number, and in other instances recorded for a second time. I do not hesitate to state that I consider them in their present condition as an unreliable record of liabilities in connection with the Works Department.

3. Several of the check-rolls throughout the year recorded the attendances of over 100 labourers, as a rule, daily under (as far as the check-roll discloses) one overseer. I would remark that it appears improbable that one overseer could accurately register attendances, prepare distribution-rolls, supervise, check, and measure work done.

I notice in some instances that the certificate of the Superintendent of Works affixed to check-rolls, to the effect that a certain sum has been paid to labourers, is for sums much below the amounts debited in the Ledgers, and apparently supported by the total represented by such check-rolls. No date to this is ever affixed.

4. The distribution-rolls appear to have been more carefully looked into when the classification of expenditure under the several estimates, as recorded at the back of check-rolls, was being prepared. I at the same time notice that several of them appear to have been issued to the overseers concerned several days after the attendance of labour was recorded, which irregularity proves that the respective distribution-rolls were not throughout the original records of attendance ; there are also some instances in which distribution-rolls have been used that do not appear to have been issued through the proper channel ; they do not bear the stamp of the Works Department, nor are they signed by either the Superintendent of Works or the Assistant Engineer.

5. The closing of check-rolls in most cases is other than systematic, and may result in incorrect totals ; for instance, a check-roll consisting of five sheets would disclose that one item in the first sheet is carried forward to the fifth sheet and another to the fourth sheet.

6. The numbering of check-rolls is also non-systematic ; some of them bear two numbers, and in some months the order is not consecutive.

7. It appears from the entries made in the Order Books that several items of stores which were recorded as ordered that year were apparently not supplied and certainly not paid for ; this procedure would disclose that the orders for stores did not receive the attention they should.

8. The advance accounts for metal and gravel were not, I consider, worked in a manner most advantageous to the Department ; in the case of gravel a profit of Rs. 700 and odd appears to have been credited to the Municipal Funds, which was actually derived from rates charged for gravel, and debited to the several estimates concerned.

I am at present engaged in the preparation of forms for books, &c., which I will submit as soon as possible, and trust that your Committee will consider them with a view to their adoption in lieu of those that were in vogue during the years 1899, 1900, and 1901.

I attach for your information seven classified statements showing the nature of errors and irregularities that have crept in during the year under review.

I am, &c.,

H. A. MARTIN,
Financial Assistant and Accountant,
Public Works Department.

ANNEXURES REFERRED TO.

1.—*Order paid for twice.*

Estimate No. 220 of 1900.—Making ten iron water-carts—

Order 10 :—		Rs. c.	
28 lb. white paint	...	6 16	(Walker, Sons & Co.)
2 gallons linseed oil	...	6 60	
½ gallon turpentine	...	1 88	
		14 64	

first payment in August, voucher 69/37, second payment in September, voucher 78/41.

2.—*Materials paid for in excess of Orders.*

Estimate No. 67—General upkeep of roads : order 33 ordered 1 cube gravel, paid for 5 cubes ; order 39, ordered 3½ cubes metal, paid for 2½ cubes in addition to what was ordered ; order 134 ordered 1½ cubes metal, paid for 1 cube in addition to what was ordered.

Estimate No. 149—Urgent repairs and works: order 29, 2 dozen 1½-inch iron screws were ordered, 4 dozen supplied.

Estimate No. 112—Repair of carts: order 2, 14 lb. Swedish iron, payment made for 28½ lb., Rs. 6·38; order 34, 4 bars angle iron, Rs. 15·15; payment was made for 19 bars flat iron (Rs. 26 22) in addition to above.

Estimate No. 172—Boundary wall, &c., Hill Castle: order 13, 72 bushels of lime, payment made for 118 bushels.

Estimate No. 177—Fish cutting blocks for St. John's market: order 1, 75 pieces of jak, payment made for 150 pieces; an entry appears made after order 2 for 76 pieces and numbered 1, probably to cover the above excess.

Estimate No. 69/7—Norris road, Lotus road to Queen's street: order 1, 50 cubes metal, payment made for 95 cubes.

Estimate No. 69/37.—Dean's road, Rudd's lane: order 4, 109 cubes metal, payment made for 135·90 cubes.

3.—*Items debited to Estimates, but unable to be traced by the Order Books.*

	Rs.	c.
Estimate No. 61, Tools for slaughter-houses, 1 bill hook	1	58
Estimate No. 67, General upkeep of roads, 14 cwt. firewood	6	30
Estimate No. 74, Purchase of tools for roads, 250 baskets	105	0
60 common lanterns	45	0
4 leather hoses	86	40
66 ft. measuring tape	7	20
1 standpipe	100	0
72 pickaxe and mamotie handles ...	27	36
66 ft. measuring tape	13	20
The above orders have been paid for, though they were cancelled in the Order Book (page 59 of BB 1); requires explanation.		
Estimate No. 89, Upkeep of Jubilee fountain, 25 ekel brooms 75 cents; order has been cancelled, but payment was made.		
Estimate No. 103, Pay of firemen, &c. 10 lb. wheel line	10	96
6 needles and 2 balls hemp thread ...	1	35
Estimate No. 112, Repair of night soil carts, 1 portable forge, &c.	81	86
Estimate No. 192 of 1899, Improvement, &c., Sea street, 50 bushels lime	14	0
Estimate No. 75, Purchase of tools for other works, 4 mamoty handles, &c. ...	2	66
Estimate No. 211, Repairs to plague camp No. 1, 40 round sticks	5	60
12 bundles battalies	2	16
the order appears to have been cancelled, but payment was made for it.		
Estimate No. 207, Upkeep of Havelock Town Park, 1 spade, &c.	21	15
Estimate No. 73/14, Kollupitiya road, Turret road to Bagatelle road, 4 cubes metal ...	40	0

Advance account, metal—

1 piece round iron	0	73
⅞-inch jumper steel, &c.	111	73
4 sledge hammers, &c.	43	88
⅞-inch octagonal jumper steel ...	31	82
2 sledge hammers	9	24
10 coil fuses, &c.	27	80
43 hammers, &c.	132	20
3 bars ⅞-inch octagonal steel ...	23	46
2 kegs blasting powder, &c. ...	33	20
2 kegs blasting powder, &c. ...	33	20
1 gallon cocoanut oil	1	49
3 cwt. coke	6	60
1 sledge hammer, &c.	33	66
1 keg blasting powder	20	20
2 sledge hammers	11	88
1 keg blasting powder, &c. ...	33	20
3 bars octagonal steel, &c. ...	72	59
1 keg blasting powder	16	60
1 keg blasting powder	16	60
1 cwt. hoop iron	12	0
1 keg blasting powder, &c. ...	16	60
1 keg blasting powder, &c. ...	16	60
200 rattan baskets	84	0
6 miners' hammers, &c.	17	50
1 gallon cocoanut oil	1	49
4 cwt. coke	8	80
18 mamoty handles	6	84
1 bundle straw	0	40

Please see remarks under "General" on this account.

Estimate No. 205—Extension of St. John's main drain, Dam street 3/156: 4,500 standard bricks, Rs. 94·50; this order 3 was issued on Estimate No. 156 for setting back boundary wall, Malay street, for 8,000 standard bricks, but was subsequently cancelled; the balance 3,500 bricks have been charged to estimates Nos. 80 and 75 of 1900; explanation seems to be necessary.

Estimate No. 169 of 1900—Trunk road to Grandpass:

	Rs.	c.
100 cwt. firewood	45	0
1 gallon cocoanut oil	1	49

4.—*Orders ordered on one Estimate and debited to another.*

Estimate No. 91—Upkeep of Galle Face Esplanade: order 1, 1 piece domba wood, Rs. 4, but debited to estimate No. 148, Watering streets.

Estimate No. 148—Urgent repairs and works: order 123, 2 barrels cement, Rs. 21·50, but debited to estimate No. 233, Repairs to culvert, Seabeach road.

Estimate No. 153—Painting Church street enclosure, &c.: order 2, 224 lb. white paint, &c., Rs. 120·96, but debited to estimate No. 90, Upkeep of Gordon Gardens; had it been debited to the former estimate there would have been an excess of Rs. 120·96.

Estimate No. 108—Repairs to cattle shed, night-soil depôt, Kanatta: order 3 for 21 mileposts, Rs. 70, and order 4, 6,200 cadjans, Rs. 102·30, but debited to estimate No. 210, Repairs to cart sheds at night soil depôt, Narahenpitiya; the balance to credit of the former was only Rs. 22·63.

Estimate No. 149—Urgent repairs and works: order 120, 1 barrel cement, Rs. 10·75, but debited to estimate No. 165/4, Drain under entrance culvert, Lady Havelock Hospital.

Estimate No. 192/10 of 1899 and 205—Extension of St. John's main drain to Dam street: order 13, 6 barrels cement, Rs. 64·50, but debited to estimate No. 236, Repairs of sewer, Dam street.

Advance account metal: order 5, 12 bamboos, &c., Rs. 7·80, but debited to estimate No. 67, General upkeep of roads.

Estimate No. 202—Drainage of a section of Kollupitiya: order 18, ¼ cwt. coir string, &c., Rs. 9·43, but debited to estimate No. 67, General upkeep of roads.

Estimate No. 79—Repairs, Dean's road paved footway: order 3, 3,000 standard bricks, Rs. 63, but debited to estimate No. 80, Drainage, Gasworks street.

Estimate No. 115—Constructing a road at night soil depôt, Narahenpitiya: order 3, ¼ barrel cement, Rs. 2·69, but debited to estimate No. 149, Urgent repairs and works, and 3¼ barrels cement, Rs. 5·37, to estimate No. 194, Repairs to culvert, Union place.

Advance account, metal: order 15, 3 cwt. coke, Rs. 6·60, but debited to estimate No. 169 of 1900, Truuk road to Wellawatta; this item appears entered in the Order Book under estimate No. 169 of 1900 also, but after order 18.

5.—*Descrepancies between Distribution Rolls and Check Rolls, &c.*

A sum of Re. 1·90 debited to estimate No. 67, General upkeep of roads, forming part of Rs. 149·88 as per check-roll 7 for November, should have been debited to the deposit made by Messrs. Baker & Hall, as it is apparent from the distribution-roll that labour was performed on their behalf for the removal of large roller; the Deposit Ledger discloses that only 95 cents was deposited.

The distribution-roll for Rs. 34·50 debited to estimate No. 80, Drainage, Gasworks street, as per check-roll 14 for November, records that 4 coolies at 40 cents each were employed on the 1st and 2nd of November, but nine days' wages have been debited.

The distribution-roll to support the expenditure of Rs. 33·75, debited to gravel, Advance account, on check-roll 18 for November, appears to be missing.

The distribution-roll for the sum of Re. 1 for week ended 24th November, connected with above check-roll, has been debited to estimate No. 67, General upkeep of roads ; the information recorded on same states that this sum should be charged to Contractor Assan Mahamadu, but it does not appear to have been recovered and credited to the estimate.

The distribution-roll to support expenditure of Rs. 8·37, on estimate No. 205, Extension of St. John's main drain, check-roll 14 for July, does not appear to have been forwarded for audit.

The distribution-roll on estimate No. 73, Trunk road to Grandpass, affecting check-roll 2 for October, amounts to Rs. 277·67, but only Rs. 191·59 appears to have been debited to the estimate ; the difference, Rs. 86·08, was apparently debited to estimate No. 73, Trunk road to Kotte, owing to the insufficiency of balance, the balance after debiting Rs. 191·59 being only Rs. 80·57.

From information noted on the distribution-rolls affecting the under-mentioned estimates, it appears that the sums mentioned were incurred on behalf of contractors ; no recovery appears to have been made as the estimates are not credited with these sums :

	Rs.	c.
Estimate No. 73—Trunk road to Wellawatta	4	50
Estimate No. 73—Trunk road to Kotte	5	50
Estimate No. 73—Trunk road to Grandpass	9	0
Estimate No. 69/6—Metalling Lotus road	6	0

The distribution-rolls for Rs. 28·32 on check-roll 18 for October for metal account for the week ended 20th October, was not signed by the overseer. The distribution-rolls for Rs. 33·75—gravel account—are apparently not in the file.

The distribution-rolls for Rs. 17·18, affecting check-roll 19 for October, under estimate No. 162 of 1900, Repairs to vegetable stall, Edinburgh market, are apparently not in the file.

A sum of Rs. 12·24 was credited to estimate No. 71/3, for gravelling Mosque lane, and debited to estimate No. 67, General upkeep of roads. On reference to the distribution-rolls for the latter estimate only a sum of Rs. 7·05 appears chargeable to this estimate, and which appears to have been separately debited. The distribution-rolls affecting the expenditure of Rs. 12·24 appears to be headed under both the estimates, without any attempt to distribute the labour.

The distribution-roll 693 (affecting check-roll 19 for November) filed with others on estimate No. 46/1, Repairs to Dean's road market, and cancelled, appears to be an exact copy of the distribution-roll 689, on estimate No. 165/5, for repairs to drain, 2nd Division, Maradana. The circumstances under which the former was prepared and subsequently cancelled must be explained. If the attendances on the distribution-rolls were entered daily, as they ought to be, a mistake of this nature would be highly improbable.

6.—Documents not signed by the Superintendent of Works.

Check-roll No. 16 for February totals Rs. 192·36 ; the Superintendent of Works certifies to the payment of only Rs. 100·77. The full amount has been debited to estimates.

Check-roll No. 12 for June. This check-roll represents expenditure to the sum of Rs. 340·38, and is not signed by the Superintendent of Works.

Check-roll No. 18 for August totals Rs. 866·79 ; the Superintendent of Works certifies to the payment of only Rs. 557·24. The full amount has been debited to estimates.

7.—General.

Estimate No. 12—Capture and destruction of dogs : order 1 was issued for 24 ekel brooms, &c., payment was made for 48 of these brooms, and a second order 1 recorded in the Order Book after 6.

Estimate No. 67—General upkeep of roads : orders from 1 to 140 on this estimate appear recorded in Order Book 1 ; these are again re-copied in Order Book 2, and orders from 141 to 215 continued. The circumstances that led to this procedure should be explained, as the orders that were recorded in Order Book 1, were not cancelled ; in short, as the Order Book now stands as a record, it would appear that orders from 1 to 140 were twice issued, though only once paid for. The orders on this particular estimate appear to have been recorded in four folios of three Order Books.

Estimate No. 80—Drainage, Gasworks street : order 10 appear to have been originally recorded for 23 gully gratings, 32 were paid for and the No. 23 altered to No. 32 to agree with the payment ; the alteration is not initialled by any responsible officer.

Estimate No. 89—Upkeep, Jubilee Fountain : order 5 follows 2 ; 3 and 4 do not appear to have been utilized.

Estimate No. 156—Setting back boundary wall, Malay street : order 3 for 8,000 standard bricks, Rs. 168, appears to have been cancelled, but payment was made for same. Another order 3 appears to have been again issued for 8,000 bricks after 4 and payment also made ; this certainly requires some explanation.

Estimate No. 112—Repair of night soil carts : order 32 was for several items of iron, but did not include 12 pieces Swedish iron, Rs. 33·44 ; this sum was, however, debited to the estimate and another order 32 inserted in the Order Book after 33 apparently to support payment ; orders 41 and 45 are inserted between orders 33 and 34 and again appear duly inserted in their numerical order ; in the first instance these orders were for Wills' industrial oil lamps, value Rs. 112, in the second order 41 was for 20 domba wood poles and order 45 for 8 cwt coke.

This estimate is debited with the sum of Rs. 275 for 12 hand-cart axles with five locks. Order 31 is quoted on the voucher as the authority ; the Order Book discloses that the item was not included, but an entry is inserted below this order which records 3 axles at a cost of Rs. 176.

Order Book 1 recorded orders on this estimate from 1 to 53 ; these were again recopied into Order Book 2, and orders from 45 to 70 continued (see my remarks under Estimate No. 67, General Upkeep of Roads).

The record of orders issued under this estimate was independently recorded under three folios of two Order Books : the several items contained in two of these orders, viz., 49 and 50, do not seem to agree with each other as appearing under two of the folios.

Estimate No. 74—Purchase of tools for roads. The orders on the estimate were recorded independently in four folios of two Order Books ; the first folio ran in order from 1 to 140 ; in the second, orders 1, 2, 13, 14, 32, 34, 35, 36 were again recorded, and in the third and fourth orders from 1 to 72 indiscriminately inserted ; the record of orders on this estimate was most disgracefully kept (see page 51 of Order Book 8) ; some of the orders recorded in one of the four folios were cancelled ; consequently Audit is at a loss to understand which folio is the correct record.

Estimate No. 117—Prevention of infectious diseases : order 1 did not contain any cadjans, 700 were paid for, and apparently to support this a second order 1 was inserted after order 4 ; order 2 was for 300 cadjans, which was also paid for ; a second order 2 was entered after 4, and a second 1, apparently to support the payment, made for 42 retties, 15 bamboos, and 3/16 cwt. coir string.

Estimate No 192/11 of 1899—Improvement of Sea street. The orders from 1 to 51 in respect of this estimate have been recorded in separate folios in Order Books 2 and 8 (see my remarks under estimate No. 67).

Estimate No. 73/28—Metal road, Fishers' Hill to Modara street. The orders recorded in Order Book are not in numerical order ; the following is the order : 2, 8, 9, 11, 1, 3, 9 ; similar irregularities were noticed under other estimates.

To the Deposit account, folio 45, Consolidating metal roadway to work yard, Harbour Works, a sum of Rs. 14·12 has been debited for labour ; this sum does not appear to be supported by the classification on check-roll ; a further sum of Rs. 9·02 is also debited on folio 46.

Estimate No. 69/19—Metalling Dam street, voucher 1/95 is stated to be a duplicate ; it supports a sum of Rs. 900 for 90 cubes of metal debited to the above-mentioned estimate.

Voucher No. 503 for May is for the purchase of one standpipe, Rs. 100 ; this sum is debited to estimate No. 74, purchase of tools for roads ; this is an improper classification.

Check-roll No. 18 for March totals Rs. 788·37, which sum has been debited to estimate No. 192/11 of 1899, Improvement and drainage, Sea street; in the column of reductions it appears that a sum of Rs. 122 was either intended to be deducted from the check-roll or otherwise accounted. I cannot trace under this estimate any transaction that would lead me to understand what was done; the Works Department should be requested to fully explain the transaction.

The pages from 354 to 361 in the Metal Ledger have been taken out; some explanation for same should be given.

Advance account, Metal. The orders under this estimate from 1 to 33 were recorded on page 133 of Order Book 6; on page 164 they were again recorded, but not in numerical order. From careful examination I am inclined to believe that the entries on this page were copied from the Metal Ledger (pages 423 and 429) with a view to support the debits then made, as the details of orders as recorded on page 164 do not agree with those recorded on page 133.

Advance account, Gravel. It appears that the entries made under pages 145 and 146 of Order Book 7 were not the originals, as they do not run in numerical order. I am strongly of opinion that the entries so made were copied from the details in the Ledger.

Estimate No. 208 of 1900—Wall, Maligakanda park: orders 8 and 10 only have been recorded on page 31 of Order Book 8. Some explanation should be advanced why the orders did not start from 1, and why 8 and 10 were apparently particularly selected. A further record of order 10 in respect of this estimate was also recorded on folio 69.

Estimate No. 196 of 1900—Improvement to Dean's road market. The orders in respect of this estimate have been recorded independently under pages 107 and 142 of Order Book 8.

Estimate No. 220 of 1900—Making ten iron water carts. The orders in respect of this estimate have been recorded independently under pages 45 and 150 of Order Book No. 8.

Estimate 70/62 for Turret Road is credited with Rs. 231·31, being value of 48 80 cubes gravel; this amount is debited to Advance account, Gravel; the nature of the transaction recorded in the Ledger is not understood. Some explanation should be called for.

Several of the check-rolls were missing from the files originally sent, and were afterwards forwarded when called for, with the exception of 12 for April, Rs. 316·63.

ANNEXURE W.

As pointed out by me in my dissent on the creation of the office of Assistant Sanitary Officer on the 14th February, 1902, I have to repeat that the creation of the offices suggested by the Superintendent of Works is illegal, for—

(*a*) The creation of office and apportionment of the salary and duties to be attached thereto should be by a by-law.

(*b*) It should have the approval of the Governor in Executive Council and the sanction of the Legislative Council, the object of the Legislature being to prevent any probable waste of Municipal funds, and any increase being given to any officer at the instance of a majority without it being properly considered.

The Secretary of State, in his despatch No. 171 of 30th May, 1887, whilst sanctioning the Ordinance No. 7 of 1887, says (paragraph 3): "The report of the Sub-Committee on the present Bill specifies three main points in which an alteration is effected of the existing Municipal system. They are—

"(1) * * * *

"(2) * * * *

"(3) Empowering the Governor, in Executive Council, to have a more direct control over the administration of Municipal Funds."

In paragraph 10 he observes: "From page 12 of the report of the Commission on the Colombo Municipality it would seem that the changes to be effected by the Ordinance now under consideration will cause only a slight addition to the cost of the staff, amounting at first to Rs. 1,663 and eventually to Rs. 6,517, and it is reasonable to suppose, as pointed out in paragraph 3 of your despatch, that improved administration will more than recoup so small a sum.

"But there are pensions and incidental expenses to be taken into consideration, and I notice that in suggesting means of meeting such expenses the Commission falls back in the first place on arrack tavern licenses, whereas it has been clearly shown that any sum derived by the Municipality from this source would be merely a deduction from the general revenues of the Colony."

ANNEXURE V.

March 14, 1866.

At a Special Meeting of the Municipal Council of Colombo held this day there were present Mr. C. P. Layard, Chairman, Messrs. Evatt, Berwick, Grinlinton, Ferdinands, (Dr.) Willisford, Venn, Van Geyzel, Tambyah, Lorensz, Alwis, and Loos.

The Minutes of the last Meeting having been read were about to be confirmed, when Mr. Berwick said that he desired to point out the fact that the appointment of officers, indicated in the Minutes, having been made before the by-laws were sanctioned, in accordance with the requirements of the 36th section of the Municipal Councils' Ordinance, had *ipso facto* been illegal.

Mr. Ferdinands agreed in the view taken by Mr. Berwick, but at the same time suggested that the irregularity might be remedied by the Council on the present occasion confirming the various appointments.

Dr. Willisford said the duty of the Council in dealing with the Minutes was simply to confirm them, provided they were a correct record of the proceedings had at the last Meeting.

Mr. Venn stated that he believed the Council making the appointments in question had acted under the impression that the by-laws giving effect to them had already been sanctioned by His Excellency the Governor.

After some further discussion, resulting in the Council deciding by a majority of 11 (Mr. Berwick being the only dissentient) that the question of the appointment was one of emergency, it was moved by Dr. Willisford, seconded by Mr. Ferdinands, and carried:—

"That the election of various officers of the Municipality at the last Meeting of Council, having been made before the proclamation of the by-laws, was *ipso facto* illegal, and the Council now proceed to remedy the irregularity they committed by electing the various officers to the various offices as then elected.

The Minutes were then confirmed.

XXX.—1903.

ADMINISTRATION REPORT

OF

THE MUNICIPAL COUNCIL OF KANDY

FOR THE YEAR

1902.

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 45 cents.

1903.

MUNICIPALITY OF KANDY.

REPORT OF THE CHAIRMAN FOR 1902.

CHAPTER I.

1.—MUNICIPAL LIMITS.

So many objections having been made, chiefly by residents, to the inclusion of Ampitiya within Municipal limits, the Chairman, Hon. Mr. Wace, gave the matter his careful consideration and personally inspected the locality. He recommended the alteration of the limits, resulting in the exclusion of thirteen villages, and the reduction in the assessment tax for the year by Rs. 3,851.

The alteration of limits received the sanction of Government, and the following was finally adopted and given force to by Proclamation dated 19th February, 1902, taking effect from 1st July of the said year:—

North, the Mahaweli-ganga; east, the Mahaweli-ganga to a point 52 chains below the Lewella ferry, and thence a straight line drawn to the south-east corner of the Hermitage estate, thence along the eastern boundaries of the Hermitage and Fairieland estates (title plans 43,322 and 42,285); south and south-west, the southern and western boundaries of the Fairieland estate, thence from the south-west corner of the Fairieland estate along the watershed of the basin of the Kandy waterworks reservoir to the eastern boundary of the land acquired for a conduit, thence along the eastern boundary of the said conduit to the Hal-oya, thence along the Hal-oya and a portion of the northern boundary of the Richmond Hill estate to the western boundary of the Borowadeniya or the Ambagahakumbura paddy fields, thence along the western boundary of the said fields to the railway bridge over the Meda-ela to the west of the slaughter-house, thence along the Meda-ela to the railway bridge over the Meda-ela at Getambe, thence along the southern boundary of the railway line to the Mahaweli-ganga; west the Mahaweli-ganga.

The Suburb of Katugastota.

Limits.—In length the portion of the high road lying between the 2¾ milestone on the Kandy-Galagedara road and the 3rd milepost on the Kandy-Panwila road and between the Pinga-oya bridge and the 3rd milestone on the Matale road; and in breadth 100 yards on the north, south, and west of the said roads, and on the east up to the Mahaweli-ganga, and on the south-west of the Matale road up to the Pinga-oya.

By this alteration the following villages were excluded:—

	Houses.
Ampitiya (from premises Nos. 33 to 277)	244
Hewaheta-Talwatta	12
Tennekumbura	57
Kadugannawa road	42
Gampola road	11
Haalmehikandura	16
Urawela	38
Bowela	35
Welatta	9
Bogodawatta	8
Huduhumpola	48
Total ...	520

As regards the division of the Municipality into wards or districts, the following recommendation by the Standing Committee was submitted:—

Resolved that the alterations be approved of and submitted to the Council for adoption.

Appendix A.—Resolved that the recommendation be adopted, and that the proposed divisions be submitted to His Excellency the Governor in Executive Council for approval (sections 6-7 of 1887).

Confirmed this 17th day of May, 1902:

H. WACE,
Chairman.

Divisions of Municipality.

Division No. I.—Bounded on the north by the Municipal limits; on the east by the Municipal limits; on the south-west and south by the Ampitiya-Talatuoya road from the eastern limit of the Municipality up to the Kandy lake, thence along the northern shore of the lake as far as the United Service Library; on the west from the Library to the Old Palace, thence by the road past the Maha Dewale and The Lodge to Hill street, along Hill

street and by the centre of Trincomalee street and the Katugastota road from the junction of Hill street with Trincomalee street as far as the Katugastota bridge. This division also includes the suburb of Katugastota.

Division No. II.—Bounded on the north and east by the limits of Division No. I.; on the south by the northern bund of the lake from the United Service Library to the southern end of Trincomalee street; on the west by Trincomalee street to its junction with Hill street..

Division No. III.—Bounded on the north-east and east by the limits of Division No. I. and of No. II. as far as the junction of Trincomalee street with King street; on the south from the junction of Trincomalee street with King street, along King street through the Military parade ground to the western redoubt, thence by the pathway to the Mahaweli-ganga; and on the west by the Mahaweli-ganga.

Division No. IV.—Bounded on the north by the limits of Division No. III.; on the east by Trincomalee street from its junction with King street up to the northern bund of the lake; on the south by Ward street and the Peradeniya road to its junction with the Halolluwa road, thence by the Halolluwa road to the ferry; and on the west by the Mahaweli-ganga.

Division No. V.—Bounded on the north by the southern limits of Divisions Nos. I., II., and IV.; on the east, south, and west by the Municipal limits.

2.—Population.

The following is a statement of the population of the Kandy Municipality, as taken from the report of the Superintendent of Census in 1901 :—

Civil		26,389
Military		125
Prisoners of war		8
		26,522
In 1902 the limits were altered: Ampitiya and other villages were excluded. The number of residents in the excluded portions approximated		2,600
Leaving a population in 1902 of		23,922

The total population, as ascertained by the previous Census, was 22,984, including 183 military.

3.—Members of Council.

Mr. L. Creasy, Provincial Engineer, Central Province, left the Island in July, 1902, on leave of absence, when Mr. W. Pole Fletcher, his successor, was nominated as member of Council in his place. Mr. Creasy returned from leave in November, and was re-nominated member by His Excellency the Governor.

The Hon. Mr. H. Wace, Chairman, left the Island on 12th November on twelve months' leave of absence. Mr. J. P. Lewis was appointed Acting Government Agent, and he assumed duties as Chairman.

Election.

List of persons qualified to be elected as Councillors and of persons qualified to vote were prepared and duly published in the *Government Gazette* of 19th October, 1902.

The elections were held for the several wards at the Town Hall on Saturday, the 6th December, 1902, and were presided over by the Hon. Mr. J. P. Lewis, Government Agent. The result of elections was as follows :—

No. 1 Ward ...	E. Beven, Esq.	No. 4 Ward ...	P. T. Habibu Lebbe, Esq.
No. 2 Ward ...	R. W. Jonklaas, Esq.	No. 5 Ward ...	J. H. Sproule, Esq.
No. 3 Ward ...	C. Vanderwall, Esq.		

The elections were all uncontested.

4.—Council Meetings.

There were thirteen general meetings of the Council during the year, of which one was special. The attendance of members was as follows :—

Hon. Mr. H. Wace ...	9	R. W. Jonklaas, Esq. ...	5
Hon. Mr. T. P. Lewis ...	3	L. Creasy, Esq.	8
J. H. Sproule, Esq. ...	8	Dr. J. Craib	8
W. D. Gibbon, Esq. ...	11	P. T. Habibu Lebbe, Esq. ...	12
E. Beven, Esq.	10	W. Pole Fletcher, Esq. ...	4
C. Vanderwall, Esq. ...	11		

5.—Standing Committee.

At the meeting of Council on 18th January the following Councillors were elected members of the Standing Committee :—Messrs. J. H. Sproule, E. Beven, C. Vanderwall, and L. Creasy, with the Chairman : three to form a quorum. On Mr. Creasy leaving the Island Mr. Pole Fletcher was elected in his place on 6th September. Mr. Creasy on his return from leave was re-elected a member of the Committee on 22nd November.

There were thirteen meetings of the Committee during the year. The attendance of members was as follows :—

Hon. Mr. H. Wace ...	8	C. Vanderwall, Esq....	 11
Hon. Mr. J. P. Lewis ...	4	L. Creasy, Esq. ...	... 7
J. H. Sproule, Esq. ...	8	W. Pole Fletcher, Esq. ...	2
E. Beven, Esq.	12		

6.—Personnel.

Mr. W. L. Kindersley, C.C.S., who had been doing duties as Municipal Magistrate, left Kandy on 14th April, 1902, on leave, when Mr. J. C. Molamure, C.C.S., was appointed to act till 17th May. Mr. F. Bartlett, C.C.S., succeeded him, and was doing duties until 8th November, when he left on leave. Mr. H. P. Borrett was appointed to act as Municipal Magistrate for a few weeks. He was succeeded by Mr. F. Bowes, C.C.S., who was appointed on 23rd December, 1902.

By letter dated 31st July, it was intimated by the Colonial Secretary that Mr. S. C. Kanakasundara who was Assistant Assessment Clerk, had been appointed as Shroff, Mullaittivu Kachcheri, and he left Municipal employ on 23rd August. Mr. W. H. Weerasinghe, who had been acting extra clerk, was appointed to succeed Mr. Kanakasundara on 1st September, 1902, and Mr. L. B. Seneviratne was selected by the Chairman from many applicants and appointed extra clerk on 1st October, 1902.

7.—Clerical Staff.

In October of last year the members of the office staff prayed the Council that a scheme be devised for the granting of annual increments of salary. This was referred to a Special Committee consisting of Messrs. J. H. Sproule, L. Creasy, E. Beven, and the Chairman.

The Committee's report was submitted at the meeting on 18th January and ordered to be circulated, to allow of its being well considered before being submitted for final approval.

The Committee's report was further considered at the meeting held on 15th February, the Council going into Committee. The following was finally adopted :—

Clerical Service: Report of Special Committee, 1902.

Your Committee appointed on 26th October, 1901, to consider a letter from members of the Municipal staff praying that a scheme be devised for the granting of annual increments of salary, beg to report that the matter has had their careful consideration, and they now beg to submit the following scheme :—

Accountant: To commence on Rs. 1,200 and rise to Rs. 1,800 by increments biennially of Rs. 100.

Correspondence Clerk: To commence on Rs. 600 and rise to Rs. 1,100 by biennial increments of Rs. 83·33.

Assessment Clerk : To commence on Rs. 500 and rise to Rs. 960 on above terms.

Assistant Assessment Clerk : To commence on Rs. 240 and rise to Rs. 500 on the above terms.

Storekeeper : To commence on Rs. 480 and rise to Rs. 600 on the above terms.

Interpreter, Shroff, Judicial Clerk : To commence on Rs. 840 and rise to Rs. 1,200 on the above terms.

Above salaries to be in full remuneration of all services required of each clerk.

Secretary to be allowed to employ an extra clerk, on vote, not to exceed Rs. 240 per annum.

Assessment Clerk and the Storekeeper to be under the supervision of the Accountant.

H. Wace, Chairman.
J. H. Sproule.
L. Creasy.

I regret I cannot sign this report. The recommendations deserve consideration.

Edwin Beven.

Kandy, January 18, 1902.

The recommendations of the Special Committee were considered *seriatim* :—

Accountant.—Proposed by Mr. Vanderwall, seconded by Mr. Beven—That the increments recommended be, as regards Mr. Vanderstraaten, the present holder of the office, annual instead of biennial. It was agreed to.

Correspondence Clerk.—The suggestion was agreed to.

Assessment Clerk.—Proposed by Mr. Vanderwall, seconded by Mr. Beven—That the maximum salary be increased to Rs. 1,100.

On a division being called for, the following votes were recorded :—

Ayes.	*Noes.*
Mr. Habibu Lebbe	Mr. Creasy
Dr. Craib	Mr. Gibbon
Mr. Vanderwall	Mr. Sproule
Mr. Beven	Chairman

Ayes, 4 ; Noes, 4.

The Chairman gave his casting vote against the proposal, and declared the motion lost.

Assistant Assessment Clerk.—The recommendation was approved of.

Storekeeper.—Proposed by Mr. Vanderwall, seconded by Mr. Habibu Lebbe—That the maximum salary be increased from Rs. 600 to Rs. 840. This was agreed to.

Interpreter, Shroff, Judicial Clerk.—It was proposed by Mr. Vanderwall, seconded by Mr. Beven—That the maximum salary be increased to Rs. 1,300. On suggestion of the Chairman it was resolved that as regards Mr. Mutukistna, the present holder of the office, the increments be made annually, and that the limit of Rs. 1,200 recommended by the Committee be accepted subject to the alteration.

Mr. Vanderwall then withdrew his amendment.

The Council then resumed.

Proposed by Mr. Vanderwall, seconded by Mr. Habibu Lebbe—That the recommendations of the Special Committee in their report be adopted as amended by the Council in Committee, and that they be as follows:—

Accountant: To commence on Rs. 1,200 and rise to Rs. 1,800 by increments in case of Mr. Vanderstraaten, the present holder, annually, but to all future occupants of the appointment biennially of Rs. 100.

Correspondence Clerk: To commence on Rs. 600 and rise to Rs. 1,100 by biennial increments of Rs. 83·33.

Assessment Clerk: To commence on Rs. 500 and rise to Rs. 960 by biennial increments of Rs. 83·33.

Assistant Clerk: To commence on Rs. 240 and rise to Rs. 500 by biennial increments of Rs. 83·33.

Storekeeper and Clerk: To commence on Rs. 480 and rise to Rs. 840 by biennial increments of Rs. 83·33.

Interpreter Shroff, Judicial, Clerk: To commence on Rs. 840 and rise to Rs. 1,200, in case of Mr. Mutukistna, the present holder, by annual increments, otherwise by biennial increments of Rs. 100.

Resolved that the annual increments commence from 1st January, 1902, and the biennial from 1st January, 1904, with exception of Mr. Goonewardene and Mr. C. D. Marcellis Wickrematunga, the dates of whose increments will be drawn in accordance with the conditions of their respective appointments, as recommended by the Standing Committee in December, 1898.

Amendment with reference to Assessment Clerk's Salary.—Read letter dated 25th February from Mr. S. W. Silva, Assessment Clerk, with reference to the result of the biennial increments of salary allowed him under the new scheme. The letter had been circulated and seen by the members.

It was proposed by Mr. Vanderwall, seconded by Mr. Beven—That Mr. Silva be placed on the same category with Messrs. Vanderstraaten and Mutukistna as long service officers, and that Mr. Silva be allowed annual increments instead of biennial.

The motion was agreed to.

In November the Accountant, Mr. Vanderstraaten, addressed the Council respecting the merging into his salary of the allowance granted him for attending to the commutation work. It was pointed out that the inclusion of the allowance was in accordance with the recommendation of the Special Committee, the extract relating to the special matter under consideration being as follows:—

"Above salaries to be in full remuneration of all service required of each clerk."

8.—Water Supply.

The following members were appointed a Special Committee at the meeting held on 18th January to deal with questions relating to water supply:—The Chairman, Messrs. Beven, Gibbon, Jonklaas, and Creasy.

9.—Audit.

By letter dated 3rd April, from the Colonial Secretary, it was intimated that Mr. J. W. Mottau was, under section 116, re-appointed Auditor by His Excellency the Governor in Executive Council. He maintained a continuous audit during the year.

10.—Municipal Works.

The expenditure sanctioned during the year for the maintenance of streets, roads, and paths; repairs of, and clearing silt from barrel drains; maintenance of buildings, pavements, bathing and dhobies' tanks, recreation ground, and sundry minor works amounted to Rs. 25,625·17:—

	Rs.	c.
Provided for in Budget, per Schedule A	22,957	17
Supplemental Budget	2,668	0
Making a total of ...	25,625	17

There were savings under different estimates amounting to Rs. 952·55, the total expenditure under the votes having been Rs. 24,662·62:—

			Rs.	c.
There was also voted for—				
Sanitary purposes			1,800	0
Disposal of night soil			2,730	0
Ferry boats and approaches			2,359	50
Clearing lake silt			1,800	0
House of shelter			210	0
Purchase of public seats			300	0
			9,199	50
The vote for the purchase of two canoes was not expended, amounting to	Rs. 401·00			
There were savings on the different estimates ...	„ 583·10			
			984	10
Making the total expenditure ...			8,215	40
For maintenance of waterworks			8,805	49
The total expenditure amounted to			8,517	69
Scavenging.				
The vote under this head was			13,209	16
The expenditure during the year amounted to			10,030	0

The scavenging work for a portion of the year was carried out departmentally.

The works done may be summarized as follows :—

Bathing and Dhobies' Tanks.—Clearing vegetation from sides and removing silt from bed of tank, superintendence, &c.

Buildings.—Sundry repairs, shifting tiles, providing new iron spouting, colour and whitewashing and painting in distemper; rebuilding a boundary wall, renewing timber of a portion of a roof at Town Hall, colour and whitewashing and repairs to the Municipal Office, and slaughter-house and cattle exposing shed, toll houses and ambalams, bandstand and house of shelter, public latrines; repairs to cooly lines and cemetery-keeper's house, superintendence.

Castle Hill Park.—Levelling ground and terracing, opening approach roads and paths, gravelling and clearing jungle, removing rubbish, superintendence, and maintenance of grounds.

Drains and Pavements.—Repairs to barrel drains and pavements, clearing silt from barrel drains, renewing and repairing manhole covers, constructing and fixing three flushing boxes, fixing gratings, rebuilding drain at Palace Square, fixing ventilating shaft, and superintendence.

Ferry Approaches.—Clearing side drains, cutting back jungle, reducing sides, metalling approach, clearing away deposits of silt, and superintendence.

Ferry Boats.—Repairs to Gonawatta and Lewella boats, renewal of timber of Gonawatta boat No. 2; transport of double canoe, and superintendence.

Lake Silt.—Removal of silt from channel and silt trap (Ampitiya) by hand labour, removal and disposal of silt by dredger, removal of silt from minor traps round lake, repairs to dredger and barges, and superintendence.

Market Buildings.—Colour and whitewashing main building and latrines, repairs to roof and gutters and down pipes, cleaning and painting ironwork, repairs to stalls, maintenance of roads and paths, repairs to drains, and superintendence.

Night Soil Disposal.—Excavating pits and covering in same, clearing vegetation and weeding grounds, repairs to hand carts and roads, superintendence.

Public Seats.—Purchase of six new seats, cost of transport and fixing same, sundry repairs.

Trees and Plants.—Cutting branches, trimming hedges, and weeding round plants.

Miscellaneous Works.—Opening path and building steps to seat in grass field, repairs to wire fences and post and rail fences, weeding island, work at recreation ground during horticultural show and superintendence.

Recreation Ground Extension.—Wages of guards in charge of prisoners and extra diets, repairs to hand carts, cost of transport of rails and trucks, and wages of watchers.

Bridge near Library.—Payment of one-third of estimated cost of widening bridge.

Streets and Roads.—Streets and roads metalled :—Victoria Drive (northern portion) Lake road, Temple street, Colombo street, Castle Hill street, Halolluwa road (centre portion), Palace square, and Market roads. Streets and roads repaired :—King street, Temple street, and Palace square. Cutting back jungle, clearing side drains and reducing sides; removing landslips; gravelling paths; deepening side drains; lowering sides of roads; repairs to cooly lines, culverts, and footbridge; fixing mileposts; repairs of a path to Dodanwela; proportion of cost of repairing tools and of store and line watchers; superintendence.

Victoria Esplanade and Recreation Ground.—Hire of bullocks and drivers for machines; clearing vegetation and weeding; deepening catchwater drain; sundry repairs; superintendence.

Meda-ela.—Clearing silt from and straightening channel and sodding bank, and superintendence.

Sanitation.—Cutting back jungle and removing rubbish and silt from the Meda-ela and Katugastota stream; outlet from lake and other drains; sundry repairs; proportion of cost of hand carts; and superintendence.

Side Drains of Streets.—For sanitary purposes clearing of silt from Trincomalee street, Ward street, Malabar street, and Town streets, repairs to hand carts, and superintendence.

Watering Streets.—Hire of bullocks and drivers, sundry repairs, and superintendence.

Waterworks.—Maintenance of mains, standposts, house service pipes, and meters; cost of mains, numbering standposts; repairs of buildings; building new set of cooly lines; sundry repairs; clearing jungle and weeding round reservoir; supply of grass to cattle exposing shed; clearing boundary of a strip of land through Hantane estate; clearing silt from storm channel and catchwater drains; superintendence and watchers; clearing and painting fountains.

Details of expenditure under the different heads are given in the report by the Superintendent of Works hereto appended (Appendix A).

The total length of streets, roads, and paths in charge of the Municipal Council is as follows :—

	Miles.	Yds.
Metalled	10	242
Gravelled...	7	918
Natural	16	1,149
Total ...	34	549

11.—WATER SUPPLY.

The supply of water in the reservoir during the year, owing to frequent rain, was well maintained. The lowest level in the reservoir was reached on 12th September, when it was 9 ft. 7 in. below spill level. The following table shows the fluctuation in levels during the year :—

January 1 ...	Spill level (49 ft.).
January 27 ...	Commenced to fall.
April 12 ...	Reached 44 ft.; commenced to rise.

April 21st	....	Reached 46 ft. 9 in.; remained at this level with slight fluctuations. till 7th May, when it commenced to fall.
July 4	...	Reached 40 ft. 4 in.; water commenced to rise.
August 7	...	Reached 43 ft.
September 12	...	Reached 39 ft. 5 in.; commenced to rise.
October 30	...	Spill level reached; remained so till end of the year.

Register of Rainfall.—See Appendix B.

Register of Rise and Fall of Water, Reservoir.—See Appendix C.

Analyses of Water.—See Appendix E.

12.—Roseneath and Amalgamated Estates.

The following is Mr. Gordon Pyper's annual report on the working of the Roseneath and amalgamated estates :—

Progress Report for the Year 1902.

Afforesting.—Much progress has been made during the year in growth of trees. The backward plants are showing up very considerably, and the well-grown saplings in sheltered ravines are beginning to crowd each other out, and it will soon be a case of the survival of the fittest. It will be remembered the seeds were planted close to provide against failures, so that where seed was good and locality favourable there has been a superabundance of growth, which Nature, however, will correct for itself by the vigorous trees outgrowing their less robust neighbours.

Tree measurements convey little meaning to the ordinary person. When reading that an *Albizzia moluccana* has grown 55 ft. high in four years and measures 4½ ft. in girth, they would naturally think a sapu 2 ft. high and 15 in. in circumference was not worth growing, let alone comparing with its big imported neighbour; but such is the difference in varieties, and all are wanted to make a jungle.

It will be instructive to watch and wonder which will be the future kings of the forest, the indigenous trees or the imported.

All the land within the catchment area was gone over during the year, and the mana grass uprooted and supplying done. Where the land was under tea cultivation few supplies were needed. The grass hills are the poor spots. Young trees do not catch on to their soil for some reason or other.

Tea.—The year was not a good one for this product, and the market was worse than the weather; notwithstanding, the crop was sufficient to pay all expenses on the estate and leave a balance, together with all the cacao crop as profit.

Cacao.—The weather, which was most unsuitable for tea, was all that would be desired for cacao, and the crop gathered was the largest ever taken from the estate, and was all profit, as the tea crop more than paid expenses.

Minor Crops.—Coffee, pepper, nutmegs, &c., gave their usual little help to profits.

Bungalows.—The Hermitage bungalow was let for the last eight months of the year.

General Remarks.—As the trees planted are getting bigger and bigger every year, the crops growing underneath them will get smaller and smaller. Of course every endeavour will be made by lopping the trees to keep crops going, to pay expenses, but the time must come when the trees will make a jungle of the land.

GORDON PYPER.

Receipts.	Rs. c.	Rs. c.
Tea sold	—	13,134 42
Minor Products :—		
Cacao	5,845 84	
Coffee	93 90	
Spices	189 91	
Tiles	189 10	
		6,318 75
		19,453 17
Expenditure.		
Superintendence	2,449 92	
Plucking and manufacturing tea	5,748 25	
Weeding	2,319 0	
General expenses	669 19	
Expenses on minor products	1,227 98	
Afforesting...	431 82	
		12,846 16
		6,607 1

Profits on Working.

	Rs. c.		Rs. c.
1899	7,552 83	1901	2,093 53
1900	2,692 10	1902	6,607 1

13.—House Service Pipes and Water Meters.

During the year the Council authorized the laying of house service pipes to twelve premises, which was duly carried out. In each case a meter was fixed on the usual conditions.

14.—Electric Lighting.

The streets and market were lighted during the year in accordance with the contract with the Colombo Gas and Water Company. There were no serious interruptions in the lighting during the year. The lamps were regularly inspected each night, and reports made of any that were not lighted.

The total cost of lighting during the year was as follows :—

	Rs.	c.
Street lighting	19,556	8
Market lighting	2,281	25

During 1901 the cost was as follows :—

Street lighting	19,264	45
Market lighting	2,561	71

The number of lamps was the same as during the previous year, namely, 200 incandescent lamps, 6 arc lamps, 50 lamps in the market; an extra lamp was added in November, 1901.

15.—Tolls.

The amount realized by sale of tolls for the year 1902 :—

	Rs.	c.
Ampitiya and Gurudeniya	233	48
Gonawatta and Talatu-oya	5,150	0
Halolluwa	480	0
Ilukmodara and Kundasale	720	0
Katugastota	8,400	0
Lewella	3,550	0
Peradeniya	2,875	0

the whole of which was recovered during the year, with exception of the Katugastota toll, the renter of which was Rs. 1,400 in arrears at the end of the year. Amount was subsequently paid.

On alteration of limits the Municipal Council ceased to draw the amount realized by sale of the Ampitiya toll, the toll being beyond the new limits. Application was made to Government for permission to draw the amount realized till the end of the year, but refused.

16.—Sanitation.

The Health Officer from time to time made frequent inspections of alleys, laundries, bakeries, and other premises. No substantial improvements were made in any of the alleys, which were kept as far as circumstances allowed in a sanitary condition. The beds and banks of streams were cleared of accumulations of silt and rubbish, and vegetation removed. Waste pieces of public grounds were also similarly treated. Silt was frequently removed from the side drains of streets and roads. On the Health Officer's report that certain cesspits were in an unsanitary condition, and on his recommendation, that they be closed, the usual authority was given to the Chairman to cause the twelve cesspits referred to to be closed and dry-earth closets substituted.

With reference to the recommendation of the Health Officer mentioned in last year's report, that cesspits situated on premises in that portion of Colombo street between Castle Hill street and Brownrigg street, and in Brownrigg street between Colombo street and King street, be closed and dry-earth closets substituted, it is understood that a survey of the premises was made during the year with a view to the acquisition of land for obtaining necessary access to the back of the premises. Up to the end of the year no communication was received from Government.

Drainage.—In reduction of a loan of Rs. 40,000 obtained from Government in 1897 for purposes of removing silt from lake and widening and improving the road round it, the Council was under engagement to pay an annual instalment of Rs. 4,000, and had paid off Rs. 16,000. In view of the funds available being inadequate to carry out several very necessary sanitary improvements, the Chairman addressed His Excellency the Governor (letter No. 77 of 25th October, 1902) and requested that he would be pleased to assist the Council by authorizing the reduction of the annual instalment by one-half. It was intimated in reply that, subject to the approval of the Secretary of State, His Excellency the Governor had been pleased to sanction the payment of the loan by an annual instalment of Rs. 2,000. The approval of the Secretary of State was conveyed by letter of 4th February, 1903. This concession was granted on the understanding that the Rs. 2,000 be devoted annually for purposes of sanitation, the works specially necessary being the concreting of pavements in different parts of the town, rebuilding of five sections of barrel drain in Colombo street, and construction of cement concrete side drains in different localities, more especially the Railway approach road, the necessity for which had been frequently pressed on the Council by the Health Officer.

In March, 1898, it was intimated to the Colonial Secretary that the Municipal Council was anxious to carry out the improvements to the drainage of Kandy, and the following copy of resolution, adopted at the meeting on 19th of that month, was forwarded: "That application be made to Government for a loan to enable the Council to carry out the work of improvement of the drains of Kandy, and that Government be further asked to make the necessary estimates." A report by the Superintendent of Works in 1896, who estimated the cost of repairing the existing drains at Rs. 328,477, also a report by Mr. Robins dated January, 1898, were forwarded to Government. Mr. Robins had been employed at the instance of the Council to make a survey of all the existing drains. The Council intimated their readiness to carry out his recommendations in respect of the improvements to the existing drains, but had no available funds, and they asked Government to grant them a loan on same terms as the waterworks loan.

In April, in reply to a question asking the Council the amount of the loan required, the Chairman stated that Rs. 251,000 was necessary for the work within the town, excluding the cost of the open built drains along Peradeniya road, Malabar street, and Katugastota road, and a statement was given of the financial position of the Council.

The following is a copy of a resolution adopted on the 16th of that month: That in view of the correspondence that had passed between Government and the Municipal Council, that the terms made by Government be accepted, and that Government be asked to have the work carried out with the least possible delay."

The Colonial Secretary stated in reply that early steps will be taken to obtain the sanction of the Legislative Council to the grant to the Municipality of Kandy of the loan.

In anticipation of the loan the Council applied for, they received from Government, after considerable correspondence, a sum of Rs. 16,300 to meet the cost of the survey of the streets and roads, repairs of the main sewers which were urgently required, and rebuilding of a portion of the barrel drain in Colombo street.

In letter dated 10th August, 1899, it was intimated that His Excellency the Lieutenant-Governor could not apply to the Secretary of State for sanction of the loan of Rs. 250,000 until the scheme and estimate, corresponding with that amount, had been submitted.

The Chairman, in reply, pointed out that the local Government and Legislative Council were already committed in the matter to the extent of the unqualified intimation of assent conveyed in letter No. 42 of 30th June, 1899, and by a resolution of the Legislative Council, of which a copy was thereto annexed.

It was understood that the Director of Public Works was of opinion that a new drainage scheme was necessary, and a member of his Department, Mr. W. A. L. Rowlands, was sent to Kandy to take levels and make a survey and frame an estimate of cost. He commenced work in 1898.

A letter to the Colonial Secretary dated 12th May, 1902, embodying a project for the sewerage of Kandy, with estimated cost, was forwarded to the Council by the Colonial Secretary's memorandum of 26th May, 1902. This was submitted to the Council at the meeting in June, but has not been finally dealt with. The estimated approximate cost is over Rs. 463,000.

17.—PUBLIC HEALTH.

The general health of residents was good during the year. There was no serious outbreak of any epidemic. The following extracts are from the report of the Health Officer, Dr. Anderson Smith :—

January.—General health good. A few cases of chickenpox reported.

February.—General health good. A few cases of chickenpox reported.

March.—General health good. A few cases of chickenpox and one case of enteric fever reported.

April.—General health very good.

May.—General health good. No case of infectious disease reported.

June.—General health good. Two cases of chickenpox reported.

July.—General health good. No case of infectious disease reported.

August.—General health good. One case of chickenpox reported.

September.—General health good. One case of enteric (imported) and one case of measles reported.

October.—General health good. No case of infectious disease reported.

November.—General health good. One case of chickenpox reported.

December.—General health good. One case of chickenpox reported.

18.—BIRTHS AND DEATHS.

The following is the return of births and deaths during 1902 :—

Population as per Census, 1901			23,922
Number of births			797
Number of stillbirths			56
			853
Number of deaths			1,103
Less jail	27		
Less hospital	447		
		474	
			629

During the previous year, with a population of 26,511, the total deaths, irrespective of hospitals and jails, was 534.

Return of Burials in Mahaiyawa General Cemetery.—See Appendix D.

19.—MARKET.

In pursuance of the recommendation of the Special Committee appointed last year, a system of printed books of tickets of four fixed values, viz., 6, 12, 30, and 60 cents, were issued to the market-keeper for recovery of amounts due on spaces occupied on Mondays and Fridays. This was commenced from 1st August, and was reported to be working smoothly. By this method there is no delay in the issue of permits and the recovery of sums due for occupation.

20.—SCAVENGING.

The work of removing sweepings of streets, house rubbish, and disposal of the same was carried out by contract. The contract terminated on 15th May. Tenders had been invited for a fresh contract, but on recommendation of the Standing Committee it was resolved that the tender for scavenging the town be rejected, and the work be carried out by the Council's employés. The work during the latter three months of the contract was very badly carried out, and there were frequent complaints by the Health Officer of neglect on the part of the contractor. The contractor was paid a monthly sum of Rs. 1,070. The work carried out by the Council's employés cost an average of Rs. 779·74 during the remainder of the year, resulting in a saving of Rs. 290·76 a month.

In September the Colonial Secretary invited attention to the unsatisfactory state of the scavenging done up to the end of May, and stated it was obvious that an improved system of sanitation is urgently necessary. In reply he was informed that there had been a marked improvement in the sanitation and scavenging of the town since the work had been taken out of the contractor's hands. The following extracts from the Health Officer's reports were forwarded :—

June.—Scavenging in town was very much better.

July.—Scavenging was much more satisfactorily carried out since the town had taken over the work.

August.—The scavenging has been satisfactorily carried out.

Payment of a sum of Rs. 908·64 was withheld from the contractor for carrying out the work as stipulated, and for cost of work done by the Council in default of the contractor.

NIGHT SOIL REMOVAL.

The total cost of this work during the year was Rs. 19,586·95. The number of premises served was 275, including Government buildings, and 31 public latrines. During the year 60 cesspits on private premises were emptied, for which Rs. 903·36 was paid by the owners. The amount recovered during the year for removal of night soil was Rs. 11,186.

As on many premises the removal of night soil was carried out by unauthorized persons, the following circular was issued to a number of residents residing in the outskirts of the town :—

Copy of Circular.

Kandy, December 8, 1902.

SIR,—REPORTS having been made that night soil is being removed from private premises and disposed of by private unlicensed coolies, I am instructed to call attention to the by-laws (*3a*, *3b*), which do not allow of the employment of the unlicensed scavengers.

I have at the same time to point out that the disposal of night soil by irresponsible persons is open to grave objection; as well as the danger, on sanitary grounds, of depositing night soil, except in very special cases (which should have the sanction of the Health Officer), on private premises in close proximity to human habitations.

H. BYRDE,
Secretary, Municipal Council.

Details of Cost of Work.—See Appendix G.

Statement of Work done.—See Appendix F.

22.—SLAUGHTER HOUSES.

The cattle and sheep brought for slaughter were continually inspected by the Health Officer, and none were allowed to be slaughtered but those free from disease. The buildings, including the cattle exposing shed, were also frequently inspected and kept in good repair and in a sanitary condition. The number of animals slaughtered was as follows :—

	1898.	1899.	1900.	1901.	1902.
Cattle ...	4,834*	5,286	5,404	5,065	5,285
Buffaloes ...	—	1,232	1,423	1,204	1,243
Sheep ...	2,645	4,550	4,073	4,672	4,903
Pigs ...	20	114	114	101	138

* Including buffaloes.

23.—POLICE.

On alteration of limits during the year and the exclusion of Ampitiya the extra sergeant and constable were withdrawn, and at the request of the Council an additional constable was placed on duty on Lewella road. The total cost of police during the year amounted to Rs. 12,854·37 (*vide* Bill, chapter II.) The cost in 1901 was Rs. 12,828·44.

The rate of assessment on the annual value of buildings and premises during the year was the same as determined on in previous year, namely, 6 per cent.

24.—ASSESSMENT.

Under the new assessment the amount estimated to be collected during the year on private premises in the town was—

	Rs.	c.
Estimated collections during the year	20,426	0
Deduction made for probable non-recoveries within the year ...	1,400	0
	19,026	0
Collections from villages	3,662	0
Government contributions	7,065	0
Approximately ...	29,753	0

There were a large number of objections, which were referred to a Special Sub-Committee for inquiry and report.

During the year arrears amounting to Rs. 6,374 were collected, the greater portion of which was from the villages, where in previous years residents had been unwilling to pay the amounts due.

Number of premises assessed	4,578
Annual value	Rs. 505,853
Number of objections made to assessment	422
Number of objections received after date	25
Dealt by Committee	397
Number of premises in respect of which objections were made ...	944
Reduction made in assessment	467
No reduction made	477

By resolutions of the Municipal Council in 1866-68 it was ordered that recoveries of assessment tax were to be made only on premises situated within quarter of a mile of the main thoroughfares. Assessment tax was not recovered on paddy fields, as paddy tax was then recovered. No recovery, therefore, was made from any of the premises within the Kandyan villages situated within Municipal limits.

By resolution of the Council on 18th November, 1899, it was resolved that all premises within the Municipal limits liable to assessment and previously omitted be assessed. It was considered that no premises could be legally exempted but such as were provided for by law.

Petitions were received from tenants of the Dalada Maligawa paddy fields and from the Mahanayake Unnanse of Asgiriya, also from Gohagoda Siri Summana Nayake Unnanse of Nittawelle Vihare, objecting to the assessment of paddy fields belonging to the temples. The matter was considered by the Standing Committee, and it was resolved that counsel's opinion be obtained on the following points :—

(*a*) Whether the Municipal Council has power to remit taxation as a matter of grace in any case.

(*b*) Whether the terms of the original grants to Buddhist temples justify the imposition of any tax by the Municipal Council on temple paddy lands.

The following statement of the case was drawn up and submitted to Mr. F. Dornhorst, Advocate, for opinion :—

Statement.

1. *Authority for collection of Assessment Tax.*—Collection of assessment authorized under section 127 of Ordinance No. 7 of 1887 (previously by section 63 of Ordinance No. 17 of 1865), with few exceptions enumerated in the provision under section 127, which do not include paddy fields.

2. *History of the Assessment within Kandy Municipality.*—By resolution of the Council in 1866-68 and in subsequent years it was resolved that assessment tax be only levied on premises within quarter of a mile of the main roads. Hence the villages, including all paddy fields, were freed from payment of assessment tax.

In respect of paddy lands, the payment of paddy tax to Government was considered as an additional reason for exempting them. Now abolished.

By resolution of Council in November, 1899, it was decided that all premises within Municipal limits liable to assessment and previously omitted be assessed. It was then considered that no premises could be legally exempted but such as were expressly provided for by law.

3. *Number of Paddy Fields liable.*—The total number of paddy fields is 426, of an annual value of Rs. 14,840, of which 85 are temple lands of an annual value of Rs. 3,545.

4. *Claims for exemption of Temple Lands.*—Claims of exemption from taxes of temple fields have been made by—

(*a*) Gohagoda Siri Summana Nayake Unnanse of Dambulla Vihare based on a document issued by the British Government dated April, 1818, restoring the lands which had been granted by Kirti Sri Raja Sinha, the Sinhalese king, and which had been forfeited to Government for disaffection (copies of documents appended). The claims were admitted by Messrs. C. R. Buller and P. W. Braybrooke, Government Agents.

(*b*) Claims by high priest of Asgiriya and the tenants of Dalada Maligawa based on the exemption of all taxation of Kandyan temple lands under section 21 of Proclamation of 21st November, 1818.

Practice in Colombo and Galle.—The Chairmen of the Municipal Councils of Colombo and Galle were asked whether the taxation of any lands, especially paddy fields situated within their respective Municipalities, was remitted by their Councils. The replies received from both are in the negative. Within the Municipalities of Galle and Colombo there are no paddy fields.

It was the feeling of the Standing Committee that all paddy lands within the Municipality should be exempted, as on principle the Council was opposed to a tax being levied on such lands, on the ground that it amounts to the taxation on food. The Standing Committee could not, however, see their way to grant such an exemption in the face of the duty imposed on the Council by section 127 of the Municipal Councils' Ordinance, which gave the Council no discretion in the matter. Hence the submission of the question to counsel for opinion.

Mr. Dornhorst was of opinion that—

(1) The Council had not the power to remit any tax.

(2) All lands are liable to taxation, save those exempted by the proviso to section 127 of Ordinance No. 7 of 1887, and the lands in respect of which exemption is claimed do not fall within the proviso.

The Council in October considered a memorandum from the Colonial Secretary forwarding petition from the residents of the villages of Mavilmada, Watapuluwa, Nittawela, Mapanawatura, Siyambalagastenna, Dodanwela, Arupola, and Yatinuwara-Talwatta, objecting to the payment of assessment tax on their premises, on the ground that they were not liable, as they thought they were situated beyond Municipal limits. The Chairman pointed out, in reply, that these villages have always been (since 1866) situated within Municipal limits and were liable.

25.—Recreation Ground.

The ground was in frequent use, as usual, during the year for purposes of cricket, football golf, hockey, and annual sports and matches. A portion of the ground was used for a circus for a short time. The buildings connected with the Agri-Horticultural Show held in May, 1902, were erected at the southern end.

26.—Recreation Ground Improvement.

At the meeting on 18th January a vote of thanks was accorded to His Excellency the Governor for sanctioning the employment of prison labour for improvement of the recreation ground, the Council paying for cost of extra guards, tools, &c.

The Superintendent of Jails was provided with hand carts and the necessary tools, and the employment of two extra guards was sanctioned by the Council. The work commenced with the clearing away of the mound of earth running parallel to the road along the eastern portion of the recreation ground.

Later on in the year a line of rails was laid and the earth removed by means of trucks, which were lent by the Public Works Department. The earth was deposited in the hollow ground to the north of the Convict Establishment. The idea is to continually fill up the hollows and then obtain ground suitable for recreation purposes. A portion of the ground was originally in possession of the military, forming part of the site of the barracks occupied by the late Ceylon Rifle Regiment, now the site of the Convict Establishment. The eastern portion of the ground, now being filled in, is occupied by a Mohammeden mosque used by pensioners and their descendants of the Ceylon Rifle Regiment. Arrangements will be made to allow them to retain possession of the high ground immediately round the mosque, which was used for purposes of burial many years ago, and to take over the low portions to the west and north of the mosque.

For the general improvement of the recreation ground several suggestions have been made by the Chairman (the Hon. Mr. H. Wace) and Mr. Creasy, Provincial Engineer, viz., the widening along the eastern side, the diversion of the main channel, the removal of the magazine, &c. But no scheme can be decided on till a survey of the recreation ground and its surroundings with sections, levels, &c., has been made. The estimated cost of the survey is Rs. 750. The Council, however, were unable to make provision for this in the Budget for 1903, and it awaits future consideration. In the meantime the widening along the eastern side will give occupation to a party of prisoners for the next two or three years. To expedite the work the purchase of a few more trucks will be necessary, the ones in use being insufficient, and some of them not very serviceable, requiring, as they do, constant repairs.

27.—Public Thoroughfares.

The Public Works Department continued during the year the maintenance of the main thoroughfares through the Municipality.

Statement of Expenditure of the Maintenance of Roads within the Municipality of Kandy for the last Ten Years.

Year.	Kandy Railway Approach Road.	Roads from Queen's Hotel, Kandy, to Katugastota.	Peradeniya Road to Lewella Ferry.
	Rs. c.	Rs. c.	Rs. c.
1892 ...	597 29 ...	2,058 26 ...	5,338 33
1893 ...	595 1 ...	2,376 84 ...	4,792 17
1894 ...	575 4 ...	2,277 37 ...	4,770 89
1895 ...	597 25 ...	2,261 65 ...	4,394 91
1896 ...	712 81 ...	2,810 80 ...	4,863 65
1897 ...	715 93 ...	2,445 56 ...	4,700 16
1898 ...	830 18 ...	3,616 13 ...	5,368 39
1899 ...	1,696 4 ...	3,231 84 ...	5,156 77
1900 ...	1,764 84 ...	4,249 26 ...	6,378 48
1901 ...	1,783 59 ...	4,997 98 ...	6,990 68
1902 ...	1,777 36 ...	4,891 49 ...	6,992 0

28.—Ornamental Trees and Plants.

Work carried on during the year was much the same as in previous years, namely, the cutting of branches of trees obstructing the road or interfering with the perahera and other religious processions, the trimming of hedges in different places, and the weeding and care of the island. A large quantity of parasites were removed from trees round the lake.

29.—Clearing Silt from Lake.

The amount spent during the year was Rs. 1,783·47. The work consisted in clearing 690 cubes of silt from the trap at Ampitiya road and the channel leading to it; 120 cubes silt were removed by hand labour from outlets of the culverts, 68 cubes from the minor traps round the lake, and 376 cubes by means of the dredger, making a total of 1,294 cubes silt removed.

30.—Dogs.

The seizure of stray dogs during the year was continued under the supervision of the police. The following is the number of dogs dealt with. The number of dogs destroyed during two years was 1,269 :—

	1901.	1902.
Total dogs seized	888 ...	933
Destroyed	621 ...	648
Redeemed by owners	267 ...	282
Escaped	— ...	3
Sold by auction	— ...	—

In December, 1901, an Ordinance to provide for the registration of dogs was passed by Government (No. 25 of 1901), which remitted the enforcement of a tax on dogs. This Ordinance was brought into operation within the Municipality of Kandy by Proclamation from 15th May, 1902.

Owners are now required to send in a description of their dogs to be registered annually on payment of a fee of Re. 1 for each dog.

31.—Municipal Magistrate's Court.

The following classified statement shows the number of cases instituted and disposed of during the year 1902:—

	Pending December 31, 1901.		Instituted during 1902.		Convicted during 1902.		Acquitted and Dismissed, 1902.*		Pending December 31, 1902.	
	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.
Cruelty to Animals (No. 7 of 1862)	—	—	2	2	2	2			—	—
Nuisances (No. 15 of 1862) ...	9	10	165	308	147	316	20	45	7	7
Police (No. 16 of 1865) ...	3	3	74	118	68	111	9	10	—	
Weights and Measures (No. 14 of 1878)	—	—	1	1	1	1	—	—	—	—
Carriers or Vehicles (No. 9 of 1901)	—	—	6	6	5	5	1	1	—	—
Municipal Councils' (1887, 1890, 1896)	11	12	351	351	275	275	76	76	11	12
By-laws (No. 19 of 1896) ...	8	8	235	471	280	435	22	43	1	1
Total ...	31	33	894	1,307	778	1,145	128	175	19	20

* Includes "withdrawn, discharged closed and work done."

32.—House of Refuge.

A caretaker was kept in charge during the year. The building and latrine attached were whitewashed and kept in good repair. Several improvements are necessary. The surrounding grounds were kept clear of vegetation. Large number of homeless people, vagrants, and passers through Kandy made use of the building. The average number of monthly occupants was 2,302, an excess over the previous year of 372. The largest number of occupants was in October of 3,136.

33.—By-laws.

Water Supply.—The amendments of water supply rules and regulations (chapter XII. of our by-laws), which had been adopted by the Council at the meeting on 18th January, 1902, were forwarded to Government for purpose of being confirmed by His Excellency the Governor. After several references, it was intimated by letter of 20th August, 1902 that His Excellency the Lieutenant-Governor, with the advice of the Executive Council, had sanctioned the by-laws. The Council was requested to furnish translations in Sinhalese and Tamil, which were put in hand.

Registration of Dogs.—Ordinance No. 25 of 1901 having come into force in Kandy by Proclamation of 15th May, it was necessary to amend the by-laws under chapter IX. The amended by-laws provided for registration of dogs, which were approved at the meeting on 18th October, were forwarded to Government on 1st November for purpose of confirmation. They were referred back to the Municipal Council for observations on remarks thereon by the Attorney-General. The observations were forwarded to Government on 20th December.*

Carriage Fare Tables.—The amendment of by-laws relating to fares for licensed carriages (chapter XV.), which were adopted by Council in the previous year, were forwarded to Government for purpose of confirmation. By letter No. 12 of 28th February it was intimated that the amendment of the by-laws was sanctioned by His Excellency the Governor and was duly published in *Government Gazette* of April. These by-laws provided for the classification of carriages and rickshaws into 1st and 2nd class.

Charge for Night Soil Removal.—The Council having received several petitions from residents and ratepayers complaining that the charge for removal of night soil was excessive, the amendment of by-law No. 3 (chapter XII.) was duly considered by the Council, and, in accordance with the rates ruling in Colombo, it was decided that Rs. 2 be recovered on each bucket on premises having an annual value over Rs. 400, and Re. 1 for each bucket on premises having an annual value less than that amount. The amendment was sanctioned by Proclamation dated 16th April, 1902.

34.—Bridge near United Service Library.

The temporary widening of this bridge, in anticipation of the visit of Their Highnesses the Duke and Duchess of York, led to a resolution on the part of the Government to carry out the work permanently. The Council paid on agreement the sum of Rs. 2,166·66, one-third of the estimated cost, and the work was carried out during the year by the Public Works Department. A saving of Rs. 1,625·22 was effected, of which one-third, Rs. 541·74, was refunded to the Council.

35.—Postal Facilities.

In March (letter No. 551) the attention of the Postmaster-General was invited to the resolution of Council forwarded to him last year, and he was asked what prospects there were of further postal facilities being provided in Kandy. In reply he stated there were no present prospects of increasing postal facilities, his estimate for 1902 not having received the approval of Government. In May the Government was addressed on the subject, and it was pointed out that the following were the present requirements:—

(1) A pillar-box at end of Malabar street.
(2) A pillar-box at the south side of the lake near Government Bungalow.
(3) A pillar-box at the 70th milepost on the Peradeniya road.
(4) A post office or receiving office at Katugastota.
(5) A receiving office at Getambe.

* N.B.—The by-laws as finally amended were forwarded on 15th May, 1903.

In reply it was stated that the Postmaster-General had been instructed to include for consideration in his estimates for 1903 cost of erecting three pillar-boxes and wages of postmen and the cost of establishing a post office at Katugastota. The proposal for a receiving office at Getambe was not considered a matter of urgency. It was stated at the same time that no undertaking can be given that the additional funds will be provided in next year's estimate, and none were provided.

36.—Town Hall.

The hall was engaged, for different purposes, twelve times during the year. On application by Miss Gibbon the free use of the hall was allowed, on the first Monday of each month, for the delivery of a course of lectures, under supervision of a Committee, for general educational purposes, on the understanding that cost of lighting be paid for on arrangement with the Resident Engineer, Gas and Water Company.

37.—Coronation of His Majesty Edward VII.

The local celebration of the Coronation was fixed for Saturday, 28th June, 1902, and the following programme was drawn up :—

7.15 A.M., Parade of troops.	3 to 6 P.M., School treat and sports.
8 A.M., Divine Service.	8 to 12 P.M., Illuminations.
10 A.M. to 12 noon, Feeding the poor.	9 P.M., Perahera.

Arrangements were made with the Electric Company for the lighting of the Octagon, the island, the library, the fountain, and the market. During the week telegrams were received of the illness of His Majesty the King, and on the morning of the 28th it was decided to postpone the celebration.

Feeding of the poor, for which arrangements had been completed, was however the only item of the programme carried out—the Mohammedans at Meeramakkam Mosque, the Hindus at the Pullaiyar Kovil, and the Sinhalese at the Nata Dewale.

After recovery of the King's health the Coronation festivities were held in Colombo on the 9th August and in Kandy on 21st August. The remaining items of the original programme were then carried out, namely, the perahera, illuminations, and sports for school children.

The principal illuminations were at the octagon end of the library, the fountain, the walls at the western end of the lake, the portion of the Kandyan wall near the library, and Sir Henry Ward's statue. The following buildings were also illuminated, and require special mention : The National Bank, Messrs. Walker, Sons & Co.'s premises, the Mercantile Bank, Kandy Club, and the Victoria Commemoration Buildings. The Queen's Hotel was illuminated by Chinese lamps ; several houses round the lake were also illuminated.

Fireworks—Shells and rockets from Castle Hill and from a barge on the lake ; a set piece and smaller fireworks on the esplanade.

Sports for children, at which Mrs. im Thurn was present, were held on the 22nd in the Barrack square from 3 to 6.30 P.M.

On the 21st all the streets within town more or less were well decorated with flags and greenery, &c. ; at night they were well illuminated with paper lanterns, vauxhall lamps, and transparencies.

His Excellency the Lieutenant-Governor held a levée on 22nd at the Pavilion, and gave a dance in the evening. The Sports Club held a gymkhana at Bogambra recreation grounds. There was a perahera about 9.30 P.M., and 49 elephants were said to have taken part.

The number of people present in Kandy to witness the celebration was very large and very orderly. Police arrangements were satisfactorily carried out.

The Municipal Council expended a sum of Rs. 1,004·21 for meeting the cost of the celebration.

The following draft of address of congratulation to His Majesty King Edward was submitted and read.

Resolved that the address with two verbal alterations be adopted as follows :—

To His Most Gracious Majesty Edward the Seventh of the United Kingdom of Great Britain and Ireland and the British Dominions beyond the Seas, King, Defender of the Faith.

We, the Chairman and Members of the Municipal Council of Kandy, in the Island of Ceylon, beg on behalf of ourselves and our fellow-citizens to approach Your Majesty with the tribute of our humble but sincere and heartfelt felicitations on the eventful and memorable occasion of Your Majesty's Coronation.

Your Majesty's visit to our mountain capital in the year 1875 is still fresh in the recollection of many of us, and the more recent visit of Their Royal Highnesses the Prince and Princess of Wales last year has given still further proof of the interest which Kandy possesses for Your Royal House, and has afforded the inhabitants of the Central Province of Ceylon the further pleasure of evincing their deep sense of loyalty to Your Throne and Person.

We desire to convey to Your Majesty the assurance of our continued loyalty and devotion, and our fervent hope that Your Majesty and Your Royal Consort the Queen may have a long, happy, and prosperous reign over your world-wide dominion.

We remain with profound respect, Your Majesty's most obedient and faithful subjects,

H. Wace, Chairman.
J. H. Sproule,
W. D. Gibbon,
E. Beven,
C. Vanderwall,
R. W. Jonklaas,
J. Craib,
L. Creasy,
P. T. Habibu Lebbe,
} Members.

This was enclosed in a handsome royal purple cover. Around the margin of the address were photographed the satinwood bridge at Peradeniya; Audience Hall, dagoba, and elephant; the frontage of door of the Old Palace; and a view of the lake, the island, and library.

38.—FINANCIAL.

Full particulars of receipts and disbursements during the year are given in the several statements in chapter II., the statements being divided under the heads of—

(1) General Revenue.
(2) Consolidated Rate (Police and Lighting).
(3) Water Rate.

The following is a general *resumé*:—

(1) *General Revenue.*

	Rs.	c.
Balance from 1901	2,615	75
Receipts during 1902	94,873	40
	97,489	15
Disbursements during 1902	102,215	5
Leaving a debtor balance at end of the year of	4,725	90

Amounts received in excess of estimate under the following heads :—

	Rs.	c.
Court fines	1,026	75
Market rents	246	27
Rents of lands and spaces and Town Hall...	353	79
Stamp duties (taverns and butchers' licenses)	185	15
Cemetery fees	240	50
Slaughter-houses	370	15

Amount under disbursements. There was an excess of expenditure over amount provided for in original Budget :—

	Rs.	c.
Interest to bank	297	62
Office charges (books, stamps, and stationery)	58	18
Scavenging	248	95
Dog tax charges	49	38

(2) *Consolidated Rate (Police and Lighting).*

	Rs.	c.
Balance from 1901	4,713	9
Receipts during 1902	28,917	91
Overplus	17	23
Debtor balance to 1903	4,063	62
	37,711	85
	Rs.	c.
Disbursements during 1902 (maintenance of Police, &c.)	37,711	85

(3) *Water Rate.*

	Rs.	c.
Debtor balance from 1901	12,109	23
Expenditure during 1902	45,437	73
	57,546	96
Receipts during the year	49,411	54
Leaving a debtor balance of	8,135	42

The receipts include an amount received on Roseneath and amalgamated estates, account of 1901, of Rs. 3,001·66.

Loans.

The following is a statement of the amounts outstanding on December 31, 1902, on the several loans obtained by the Council :—

I.—*Waterworks Construction Account.*

		Rs.	c.
Original loan		250,000	0
Amount due on January 1, 1902		186,359	90
During the year the Council paid to Government ...	Rs. 12,500·00		
On account interest	„ 7,403·93		
The balance in reduction of loan		5,096	7
Leaving a sum due to Government at end of 1902		181,263	83

II.—*Improvement of Victoria Drive and removal of Silt from the Lake.*

	Rs.	c.
Original loan	40,000	0
Amount due on January 1, 1902	28,000	0
Reduced by the annual instalment	4,000	0
Leaving balance due at end of the year	24,000	0

III.—*Purchase of Lands within the Catchment Area of the Reservoir.*

	Rs. c.
Original loan	103,000 0
Amount due on January 1, 1902	96,337 1
During the year the Council paid, in addition to interest at 4 per cent., a sum in reduction of loan at the rate of 2 per cent.	1,917 10
Leaving due at end of the year	94,419 91

IV.—*Instalment on Account of Loan sanctioned for Improvement of the Drainage Scheme.*

		Rs. c.
The original loan		16,300 0
Paid during the year	Rs. 311·84	
Paid during the previous year	„ 629·71	
		941 55
Leaving due at end of the year		15,358 45

CHAPTER II.

The following is an abstract of receipts and disbursements for 1901 and 1902 :—

	1901.				1902.			
	Receipts.		Disbursements.		Receipts.		Disbursements.	
	Estimated.	Actual.	Estimated.	Actual.	Estimated.	Actual.	Estimated.	Actual.
	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
General Revenue :—								
Original ...	102,526 50	—	102,489 52	—	99,632 47	49,873 40	103,847 0	102,215 5
Supplementary No. 1	—	—	3,711 35	—	—	—	5,133 46	—
Do. No. 2	3,713 85	—	3,797 92	—	—	—	—	—
	106,240 35	102,445 73	109,998 79	105,624 40	99,632 47	94,873 40	108,980 46	102,215 5
Assessment tax ...	35,206 0	27,613 68	38,561 0	29,526 45	35,551 0	28,935 14	37,035 0	37,711 85
Supplementary No. 1 ...	—	—	2,836 51	—	—	—	250 0	—
Water rate ...	56,793 80	51,051 17	53,090 25	51,577 18	46,618 0	49,411 54	44,915 0	45,437 73
Supplementary No. 1	—	—	—	—	—	—	200 0	—
	198,240 15	181,110 58	204,486 55	186,728 3	181,801 47	173,220 8	191,380 46	185,364 63
Balances (1901) :—								
General ...	—	5,794 42	—	—	—	2,615 75	—	—
Assessment ...	—	6,625 86	—	—	—	4,713 9	—	—
Water rate ...	—	—	—	11,583 22	—	—	—	12,109 23
		193,530 86		198,311 25		180,548 92		197,473 86
Balances (at end of 1902) ...	—	12,109 23	—	2,615 75 4,713 9		4,725 90 4,063 62 8,135 42	—	—
		205,640 9		205,640 9		197,473 86	—	197,473 86

The details of the receipts and expenditure are given in the following statements :—

General Revenue (No. 1 Account) : Receipts.

	Estimated for 1901.	Realized.	Estimated for 1902.	Realized.
	Rs. c.	Rs. c.	Rs. c.	Rs. c.
Arrears.				
Commutation rate		56 0		105 0
Rents		77 50		129 75
Tolls and interest ...		—		777 99
Tax on vehicles and animals ...	1,500 0	96 35	1,500 0	42 7
Tax on dogs		10 27		—
Costs		1 53		1 80
Scavenging		1,093 50		768 0
Police Court fines ...		254 25		—
Cemetery.				
Fees	1,075 0	1,212 0	950 0	1,190 50
Commutation Rate ...	11,750 0	11,265 50	10,200 0	10,252 0
Interest	75 0	133 9	100 0	82 73

	Estimated for 1901.	Realized.	Estimated for 1902.	Realized.
	Rs. c.	Rs. c.	Rs. c.	Rs. c.
Judicial Account.				
Municipal Court fines	1,380 0	1,353 50	1,400 0	2,295 75
Police Court fines	720 0	1,156 10	850 0	981 0
Licenses.				
Auctioneers and brokers	200 0	240 0	200 0	280 0
Opium	7,050 0	7,050 0	7,250 0	7,250 0
Special slaughter	—	—	—	—
Sundries	100 0	69 25	75 0	96 0
Dangerous and offensive trades ...	625 0	737 50	625 0	711 25
Miscellaneous Receipts.				
Cattle trespass	25 0	16 0	—	—
Badges for horsekeepers, &c. ...	150 0	166 75	310 0	174 0
Sundries	125 0	131 15	—	156 44
Public Market.				
Monthly rents	8,750 0	9,331 78	9,250 0	9,174 22
Lighting	2,925 0	2,034 69	1,987 0	2,043 54
Costs	140 0	207 44	335 0	161 24
Daily rents	4,100 0	4,223 67	4,000 0	4,439 27
Public Works.				
Government contribution	850 0	850 0	850 0	850 0
Perahera booths (esplanade rents) ...	150 0	146 0	130 0	175 25
Recreation ground rents	200 0	217 50	200 0	315 0
Rents.				
Lands and spaces	550 0	616 75	400 0	776 4
Vegetable market	280 0	300 0	300 0	250 0
Town Hall	300 0	525 0	400 0	160 0
Cattle shed	410 0	445 25	450 0	557 50
Stamp Duties.				
Carriages, carriers, and boats ...	2,620 0	2,868 0	2,000 0	2,637 0
Hotels and liquor	6,750 0	6,136 0	5,950 0	6,031 50
Proctors and notaries	800 0	505 0	500 0	475 0
Butchers	185 0	185 0	175 0	200 0
Poisons and firearms	17 50	76 25	170 0	53 25
Taverns	3,465 0	4,000 0	4,000 0	3,583 40
Scavenging.				
Bucket fees and costs	11,485 0	11,186 0	11,000 0	9,814 87
Slaughter-houses.				
Fees from cattle	5,050 0	5,007 0	5,000 0	5,307 25
Fees from sheep and goats ...	550 0	583 98	550 0	612 90
Taxes.				
On bullocks	300 0	262 0	300 0	166 0
Dogs	150 0	103 50	175 0	210 0
Vehicles and animals	800 0	765 50	750 0	913 25
Costs	—	2 28	—	6 6
Tolls.				
Bogambara	40 0	40 0	40 0	40 0
Ampitiya and Gurudeniya... ...	1,620 0	1,620 0	233 48	233 40
Gonawatta and Talatu-oya... ...	5,600 0	5,600 0	5,150 0	5,150 0
Halolluwa	460 0	460 0	480 0	480 0
Ilukmodara and Kundasale... ...	610 0	610 0	720 0	720 0
Katugastota	10,020 0	10,020 0	8,400 0	7,000 0
Lewella	3,500 0	3,500 0	3,550 0	3,550 0
Peradeniya and Eriyagama ...	3,112 0	2,334 1	2,875 0	2,875 1
Caldera's Property, sale of ...	543 85	543 85	—	—
Sundries.				
Suspense	—	315 5		41 31
Sundry debts recovered	—	513 82		561 87
Stores	—	543 76		—
Dog collars	—	9 72	8,077 38	—
Securities	—	278 30		—
Stage fittings	—	—		5 0
Manure	—	358 39		10 0
		102,445 73		94,873 40
Balance from 1900 and 1901 ...	—	5,794 42	—	2,615 75
Balance to 1903	—	—	—	4,725 90
	—	108,240 15	—	102,215 5

General Revenue (No. 1 Account): Disbursements.

	1901. Rs. c.		1902. Rs. c.
Arrears.			
Commutation rate	131 50	...	—
Wages, commission, &c....	—	...	134 32
Cemetery Account.			
Establishment	960 0	...	960 0
Tools, books, &c.	63 53	...	43 96
Commutation Rate.			
Commission	682 41	...	601 95
Advertising	34 75	...	38 59
Supervision and clerical labour	240 0	...	240 0
Peons	140 0	...	140 0
Serving, &c., of schedules	47 50	...	47 50
Printing books and forms	95 41	...	136 34
Contingencies	0 40	...	0 55
Government Loans, repayment ...	4,318 16	...	4,311 84
Interest on Government Loans ...	1,915 24	...	1,585 42
House of Shelter.			
Wages, &c.	199 25	...	186 87
Judicial Account.			
Establishment and Magistrate	1,650 0	...	1,750 0
Printing, &c.	45 5	...	71 12
Legal expenses	147 75	...	120 1
Licenses.			
Printing and advertising	45 25	...	31 75
Miscellaneous Charges.			
Seizing cattle	6 0	...	—
Badges, &c., to horsekeepers	134 30	...	192 50
Sick pay, &c.	248 8	...	354 18
Sundries	35 31	...	44 76
Fire engine	236 97	...	164 97
Office Charges.			
Establishment and Auditor	5,786 97	...	6,435 77
Advertising	65 80	...	33 92
Furniture	50 87	...	—
Stationery and books	568 44	...	273 52
Stamps	90 77	...	64 23
Sundries	177 57	...	96 7
Printing	45 45	...	60 75
Pension account	810 33	...	810 28
Public Market.			
Wages and commission	1,224 39	...	1,398 95
Lighting	2,561 71	...	2,516 37
Books and forms	167 28	...	225 28
Sundries	75 25	...	96 31
Disinfectants	1 26	...	1 98
Public Works.			
Estimates	26,285 26	...	25,841 26
Printing	85 95	...	106 25
Orderly	113 28	...	118 61
Perahera booths	109 22	...	109 77
Rents.			
Rent of lands	105 25	...	96 25
Sundries	1 3	...	1 3
Town Hall	515 23	...	329 29
Cattle shed	383 47	...	422 52
Sanitation and Scavenging.			
Establishment and uniforms	5,646 25	...	5,500 0
Disinfectants, burials, &c.	177 90	...	164 31
Works recommended by Health Officer ...	924 18	...	998 90
Clearing side drains, &c.	843 29	...	799 84
Scavenging contract and extras	13,209 16	...	4,572 60
Scavenging departmentally	—	...	5,458 17
Printing	6 50	...	—
Night soil work	17,486 76	...	19,586 95
Opening pits	2,716 14	...	2,727 15
Clearing of lake silt	1,797 57	...	1,783 47
Slaughter-houses.			
Establishment	738 0	...	738 0
Feeding cattle	871 80	...	901 6
Books and forms	106 50	...	80 0
Sundries	40 94	...	46 76
Stamp Duties.			
Printing, commission, &c.	731 66	...	698 8

Taxes.	1901. Rs. c.	1902. Rs. c.
Seizing, &c., of dogs	465 4	... 499 38
Expenses on account of vehicles and animals ...	98 96	... 95 30
Time Charges.		
Wages, powder, &c., on account of gun... ...	425 41	... 505 92
Wages on account of clock		
Volunteer and Public Band	1,200 0	... 1,200 0
Tolls.		
Repair of boats and approaches	3,659 72	... 1,806 55
Sundries.		
Suspense	413 80	... 311 71
Clearing private cesspits	63 30	... —
Manure	73 51	... 43 21
Sundry debtors	367 14	... 619 54
Plague precautions	—	... 28 68
Public seats	282 11	... 291 24
Securities	805 90	... 903 40
Stores	—	... 264 43
Stage fittings	215 30	... —
Reception of Royal Visitors	1,522 48	... —
S. Caldera	6 0	... —
Fish experiments	127 44	... —
Exhibition account	—	... 22 99
Coronation account	—	... 1,004.21
By-laws and Municipal limits	—	... 70 54
Interest to bank	—	... 297 62
	105,624 40	102,215 5
Balance ...	2,615 75	—
	108,240 15	102,215 5

No. 2 Account: Consolidated Rate (Police and Lighting).

	1901.		1902.	
	Estimated.	Realized.	Estimated.	Realized.
Receipts.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
Arrears—tax	1,530 0	3,467 15	5,800 0	6,409 36
Do. costs	—	70 28		373 68
Tax for the year 1902	33,426 0	23,885 83	29,751 0	22,067 73
Interest	250 0	80 63	—	—
Overplus by sales	—	2 67	—	17 23
Costs	—	44 47	—	67 14
Sundry debtors	—	62 65	—	—
Balance from 1901	—	6,625 86	—	4,713 9
Balance to 1903	—	—	—	4,063 62
	35,206 0	35,239 54	35,551 0	37,711 55
Disbursements.		Expended. Rs. c.		Expended. Rs. c.
Arrears—commission, &c.	—	109 32	—	270 35
Charges account, viz., establishment, stationery, &c.	—	3,769 70	—	3,757 42
Costs	—	30 20	—	50 55
Police maintenance for the year	—	6,182 77	—	6,367 2
Street lighting	—	19,264 45	—	19,556 8
Street names and house numbers	—	135 5	—	39 2
Sundries.	—	34 96	—	—
Police maintenance	—	—	—	6,918 83
Balance carried forward	—	4,713 9	—	—
Interest to bank	—	—	—	502 58
Assessors' fees	—	—	—	250 0
		34,239 54		37,711 85

The percentage of recoveries on account assessment tax is shown below :—

	Rs. c.
1. Total of one year's tax	35,551 0
2. Arrears on December 31, 1901	6,264 3
3. Percentage of 2 to 1	17·62
4. Arrears collected in 1902	6,409 36
5. Collections of 1902 tax	22,067 73
6. Total collected	28,477 9
7. Amount irrecoverable	—
8. Arrears of 1902 at end of 1902	13,483 27
9. Percentage of 8 to 1	37·90

The particulars of cost of police supplied during the years ended 31st December, 1900, 1901, and 1902, are as follows :—

	1900.	1901.	1902.
	Rs. c.	Rs. c.	Rs. c.
Half salary of one Inspector at Rs. 1,025·26 per annum	512 64	512 64	512 64
Half salary of one Clerk at Rs. 700 per annum ...	350 0	350 0	350 0
Half salary of one Registrar of Servants at Rs. 300 per annum	150 0	150 0	150 0
Pay of two 1st class Native Sergeants at Rs. 480 per annum each	960 0	1,200 0	1,046 66
Pay of two 2nd class Native Sergeants at Rs. 320 per annum each	640 0	640 0	640 0
Pay of 35 Native Constables at Rs. 210 per annum each	7,350 0	7,980 0	8,312 50
Two per cent. on above total for pension ...	199 24	216 64	220 22
Uniform at Rs. 15 per man per annum ...	585 0	637 50	656 40
Horse allowance for one Inspector	420 0	420 0	420 0
Oil for lanterns, station-house	261 96	384 71	241 92
Cost of meals supplied to prisoners detained in lock-ups for offences committed within the Municipality	168 28	228 26	217 84
Petty expenses	94 91	108 69	86 19
Total ...	11,692 3	12,828 44	12,854 37

No. 3 Account: Water Rate.

A comparative statement of the receipts and expenditure during 1901 and 1902 on account of water-rate is annexed :—

	1901.		1902.	
	Estimated.	Realized.	Estimated.	Realized.
Receipts.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
Arrears—rate	1,635 0	2,569 78	1,500 0	3,019 94
Do. costs ...	—	73 24		153 72
Rate for the year ...	25,455 0	24,816 64	24,068 0	21,332 13
Sundries.				
Sale of grass	900 0	871 80	900 0	843 6
Sale of bricks ...	—	16 0	—	—
House service	350 0	543 15	550 0	1,123 76
Costs for the year ...	—	53 91	—	75 31
Rent of meters	300 0	17 89	100 0	—
Rent of bungalows	—	—	—	310 0
Water in excess	500 0	12 48	100 0	—
Water sold...	2,000 0	—	2,000 0	2,278 98
Receipts from Fairieland	26,550 0	22,027 28	17,400 0	20,047 14
Do. Roseneath and Hermitage ...				
Acquisition of land from 1899 ...	1,103 80	1,103 80	—	—
Sundry debtors	—	49 0	—	—
Suspense	—	—	—	227 50
Balance to 1903	—	12,109 23	—	8,135 42
	58,793·80	64,264 20	46,618 0	57,546 96
Disbursements.		Expended.		Expended.
		Rs. c.		Rs. c.
Balance from 1901 and 1902 ..	—	11,583 22	—	12,109 23
Arrears—costs	—	65 82	—	121 64
Charges—establishment, stationery, &c. ...	—	3,370 6	—	3,396 95
Interest and sinking fund	—	18,368 12	—	18,251 31
Waterworks maintenance	—	5,333 9	—	7,156 20
House service	—	645 87	—	2,018 34
Costs, 1902	—	30 20	—	38 57
Extra clerk	—	13 33	—	—
Meters	—	481 63	—	546 48
Assessors' fees	—	—	—	200 0
Legal expenses	—	—	—	74 0
Working of Fairieland and Roseneath ...	—	19,982 87	—	12,605 52
Interest to bank	—	953 37	—	909 84
Repair of plumber's house... ...	—	1,162 23	—	—
Hermitage bungalow	—	983 9	—	9 50
Suspense	—	1,291 30	—	109 38
		64,264 20		57,546 96

The percentage of recoveries on account water rate is shown below :—

		Rs.	c.
1.	Total of one year's tax	24,068	0
2.	Arrears on December 31, 1901	2,283	70
3.	Percentage of 2 to 1	9	49
4.	Arrears collected in 1901	3,019	94
5.	Collections of tax, 1902	21,332	13
6.	Total collected	24,352	7
7.	Amount irrecoverable	—	
8.	Arrears of 1902 at end of 1902	2,735	87
9.	Percentage of 8 to 1	11	36

SAM. HAUGHTON,
Chairman.

Kandy, August 15, 1903.

APPENDIX.

A.—Statement showing the Average Expenditure for the Three Years up to December 31, 1900, and the Amounts estimated, voted, and expended during the Years 1901 and 1902 on Public Works under different Estimates.

Estimate No.	Estimate of Expenditure.	Average for Three Years to December 31, 1900.	Amount of Estimate, 1901.		Amount of Estimate, 1902.	
			Voted.	Expended.	Voted.	Expended.
		Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
1	Upkeep of pavements and drains ...	2,056 81	2,635 50	2,626 39	2,500 0	2,498 72
2	Town streets	3,990 9	6,758 32	6,750 73	6,700 0	6,880 80
3	Alutgantota and Lady Anderson's roads ...	721 49	816 32	812 90	816 36	814 63
4	Udawattekele roads and paths	1,535 25	1,992 37	1,989 1	1,892 0	1,891 80
5	Halolluwa, Bahirowakanda, and other roads ...	1,136 75	1,872 32	1,859 60	2,143 15	2,143 2
6	Municipal buildings	1,072 70	1,470 0	1,461 19	1,770 0	1,768 7
7	Watering streets	379 99	836 0	695 59	700 0	549 96
8	Market buildings and premises	1,127 84	2,132 0	2,165 25	1,713 0	1,713 1
9	Ornamental plants	198 89	100 0	99 18	200 0	199 93
10	Tools	376 53	466 0	485 85	400 0	400 15
11	Maintenance of bathing and dhobies' tanks ...	102 93	130 0	127 34	210 0	198 33
12	Victoria esplanade and recreation grounds ...	964 45	846 0	845 74	846 0	855 44
13	Sundry minor works	488 13	500 0	496 75	300 0	294 47
14	Repairing cemetery-keeper's house ...	112 15	100 0	68 77	100 0	87 17
15	Contribution (one-third cost) towards bridge near library	—	—	—	2,166 66	2,166 66
•16	Castle Hill park	—	—	—	1,248 0	1,247 21
17	Recreation ground extension	—	—	—	1,220 0	1,255 26
18	Meda-ela, clearing silt, &c., ...	—	309 48	307 21	700 0	697 99
	Total ...	—	—	—	25,625 17	24,662 62
A	Sanitation account	991 34	1,000 0	924 18	1,000 0	999 19
B	Clearing side drains of town	763 96	850 0	843 29	800 0	799 55
C	Opening and covering pits	1,938 61	2,730 0	2,716 14	2,730 0	2,727 15
D	Ferry approaches	318 67	565 90	557 73	465 90	424 71
E	Ferry boat, repairing	444 62	918 60	831 5	578 60	516 43
F	Repairing ferry boat, Gonawatta ...	684 28	573 0	541 66	914 0	865 41
G	Double canoe for Kundasale	—	555 0	553 26	401 0	—
H	Lake silt	1,391 38	1,800 0	1,797 57	1,800 0	1,799 17
—	Clearing silt traps Nos. 1 and 2	—	—	—	—	—
I	House of shelter	176 95	210 0	199 25	210 0	186 87
	Maintenance of works	—	—	—	8,805 49	8,517 69
	Maintenance of fountains	—	—	—		
	Public seats	—	285 0	282 11	300 0	288 92
	Scavenging streets	—	—	—	—	5,701 17
	Katugastota private privy (on account A. Sinnatamby, Muhandiram)	—	—	—	—	412 63
	Total ...	—	—	—	18,004 0	23,238 89

Details of Expenditure.

		Rs. c.	Rs. c.
1.	*Bathing and Dhobies' Tanks* (Estimate 11).		
	Clearing vegetation from sides and removing silt from bed of tank	136 3	
	Proportion of cost of store and line watcher	45 30	
	Superintendence	17 0	
			198 33
2.	*Buildings* (Estimate 6).—The buildings repaired and maintained are the Town Hall, Municipal Office, stores, and outhouses, slaughter-houses, and cattle exposing shed, Inspectors' room, toll houses, ambalams, public latrines, overseer's office and store, bandstand.		
	(*a*) *Town Hall.*		
	Shifting tiles	244 80	
	296 lineal feet new galvanized iron spouting	148 0	
	Repairs to store	31 43	
	Repairs to gate	11 59	
	Repairs to roof of store, renewing timber	83 30	
	387 squares colour washing and painting in distemper ...	259 93	
	Sundry repairs	132 45	
	5 cubes of boundary wall rebuilt	125 12	
	New window for store	2 50	
	Painting railings, Town Hall	13 84	
	Padlock and key for gate	5 25	
	10 cubes gravel transported	15 0	
	10 cubes gravel spread	12 50	
			1,085 71
	(*b*) *Slaughter-houses and Cattle Exposing Shed.*		
	192 squares whitewashing	56 92	
	Tarring timber work	18 56	
	Sundry repairs, roof	72 8	
	Repairs to barrel drain	10 59	
	New water troughs	10 73	
			168 88
	(*c*) *Ambalams.*		
	45 squares whitewashing	13 40	
	6·50 cubes gravel transported	9 74	
	6·50 cubes gravel spread	7 93	
			31 7
	(*d*) *Toll-houses.*		
	Shifting tiles	24 21	
	59 squares whitewashing	17 55	
	Sundry repairs	8 62	
	Tarring	3 16	
			53 54
	(*e*) *Bandstand.*		
	Fixing valance tiles	17 84	
	Cleaning and oiling woodwork of building over well ...	8 60	
	Cleaning and oiling woodwork of bandstand	15 80	
			42 24
	(*f*) *Overseer's Office and Store.*		
	Shifting tiles	—	32 25
	(*g*) *Latrines, Public.*		
	Painting signboards	13 75	
	Fixing signboards	3 16	
	Purchase of galvanized iron sheets	79 81	
	184 squares whitewashing	54 55	
			151 27
	(*h*) Repairs to hand cart	50 0	
	Repairs to tools	40 23	
	Proportion of costs of store, line watcher	45 30	
	Superintendence	26 0	
			161 53
	(*i*) Sundry repairs to cooly lines	—	41 58
	(*j*) *Cemetery-keeper's House* (Estimate 14).		
	Shifting tiles	17 94	
	55 squares colour and whitewashing	33 79	
	Sundry repairs	22 44	
	Fixing four window panes	2 0	
			87 17
	(*k*) *House of Shelter.*		
	Wages of caretaker	146 0	
	Rebuilding wall of hut	5 97	
	Shifting tiles	4 26	
	25 squares colour-washing	12 64	
	Purchase of three latrine boxes	18 0	
			186 87
			2,042 11

		Rs. c.	Rs. c.
3.	*Castle Hill Park* (Estimate 16).		
	Levelling ground and terracing	217 70	
	Opening paths	129 3	
	Removing old buildings	12 34	
	Constructing drains and steps	83 54	
	Painting tubs for plants	11 46	
	Opening main approach road	163 89	
	Transport of sods and laying	118 53	
	Repairing damage to paths by rain	63 45	
	79 cubes gravel transported and spread	98 24	
	Clearing jungle and removing rubbish	71 10	
	Superintendence	37 0	
	Maintenance of grounds, sweeping, care of plants, weeding, &c. ...	240 93	
			1,247 21
	Drains and Pavements (Estimate 1).		
	Town Streets.		
	207 lin. ft. pavement repaired	102 90	
	104 lin. ft. barrel drain repaired	160 16	
	2,140 lin. yards barrel drains cleared of silt	299 42	
	37 manholes renewed and repaired	65 53	
	3 flushing boxes and fixing	93 67	
	Opening up drain and removing silt, Palace square... ...	51 54	
	Fixing grating	52 88	
	43·50 cubes earth excavated for rebuilding drain, Palace square ...	43 24	
	145 lin. ft. paved drain and side walls constructed, Palace square ...	461 64	
	Levelling ground and removing rubbish, Palace square ...	62 19	
	Cleaning and tarring manhole covers	11 25	
	Transport of bricks.	2 83	
	40 lin. ft. spouting for drain	20 0	
	Repairs of trucks	6 9	
	Breaking down wall and removing materials near Military hospital	20 89	
	Fixing ventilating shaft, Colombo street	64 0	
	6 cubes gravel transported and spread	8 68	
	Laying drainage pipes across Kachcheri road	15 26	
	Proportion of cost of store and line watcher	46 81	
	Proportion of cost of repair of cooly line	33 42	
	Proportion of cost of repair of tools	35 1	
	Superintendence	42 0	
			1,699 41
	Trincomalee Street.		
	94 lin. ft. pavement repaired	63 18	
	43 lin. ft. barrel drain repaired	87 49	
	3,341 lin. yards barrel drain cleared of silt.	500 75	
	80 manholes renewed and repaired	140 49	
	Clearing and tarring manhole covers	7 40	
			799 31
			2,498 72
5.	*Ferry Approaches* (Estimate D).		
	Clearing side drains, cutting back jungle, and reducing sides at three ferries	88 56	
	Clearing landslip and deposit of silt	79 96	
	20 cubes metal getting, transporting, and spreading. ...	207 96	
	10·50 cubes gravel transported and spread	16 23	
	Superintendence	32 0	
			424 71
6.	*Ferry Boats* (Estimate E).		
	Repairs to Gonawatta boat No. 1	93 0	
	Transport of materials to Gonawatta and Lewella	32 35	
	Cost of material for Gonawatta boat No. 1	71 30	
	Hauling up Lewella boat	8 72	
	Cost of material, Lewella boat	43 57	
	Labour, repairing Lewella boat by contract	80 0	
	Hauling up Gonawatta boat No. 2	61 18	
	Proportion of cost of repair of tools	33 0	
	Proportion of cost of store and line watchers	46 81	
	Transporting and fitting double canoes, Lewella and Kundasale ...	29 60	
	Superintendence	17 0	
			516 53
7.	*Renewal of Timber of Gonawatta Ferry Boat No. 2* (Estimate E).		
	Cost of timber, rail and cart hire	411 67	
	Sundry materials: iron, oakum, pitch	53 74	
	Labour, removing timber contract	400 0	
			865 41
8.	*Lake Silt Removal* (Estimate H).		
	690 cubes earth removed from channel and silt trap (Ampitiya road)	723 59	
	68 cubes silt removed from minor traps round lake ...	78 97	
	376 cubes of earth removed by dredger and transported ...	564 90	
	New cadjan roof to dredger	18 77	
	Repairs of hand carts	25 0	
	Carried forward ...	1,411 23	

		Rs. c.	Rs. c.
	Brought forward ...	1,411 23	
	120 cubes silt removed by hand labour from outlet of culvert ...	120 52	
	Clearing and tarring dredger	26 61	
	Repairing and fitting new planks to deck of barges ...	94 24	
	Cost of coir ropes for towing barges	6 0	
	Repairs of portion of gib of dredger and fitting	68 74	
	Cost of sweeps for barges	32 83	
	Superintendence	39 0	
			1,799 17
9.	*Market Buildings* (Estimate 8).		
	Repairs to roof, gutters, and down pipes	109 57	
	Proportion of cost of cooly lines	28 50	
	213 squares colour and whitewashing main building ...	78 23	
	155 squares of whitewashing latrines	51 26	
	Maintenance of grounds	123 58	
	Repairs to drains and fixing gratings	35 73	
	Repairs to latrine	22 87	
	Tarring latrine	4 23	
	Proportion of repairs to hand cart	50 0	
	Cleaning and painting ironwork	646 89	
	Repairing stalls	52 38	
	Repairs of trucks, &c.	21 42	
	33 cubes gravel transported	36 25	
	12 cubes gravel spread	6 2	
	33·90 cubes metal getting, transported, and consolidated ...	299 3	
	Proportion of cost of repair of tools	38 74	
	Proportion of cost of store and line watcher	46 81	
	New ladder	4 50	
	Superintendence	57 0	
			1,713 1
10.	*Miscellaneous* (Estimate 13).		
	Opening footpath to seat, grass land	20 5	
	Building approach steps and drain	53 89	
	Cutting out trees	24 81	
	Repairs to wire fence, esplanade and elsewhere	44 9	
	Repairs to post and rail fences	48 48	
	Weeding and cutting grass in island	29 85	
	Clearing jungle and removing rubbish from grass land ...	9 38	
	Painting railing of bridge	3 37	
	Cutting bamboos and fixing fence, recreation ground (Horticulture Show)	12 37	
	Removing mud and spreading sand	11 68	
	Proportion of cost of repair of cooly lines	16 50	
	Superintendence	20 0	
			294 47
11.	*Night Soil, Disposal of* (Estimate C).		
	1,399 cubes of earth excavated in opening pits	1,235 56	
	Covering in pits	1,160 51	
	Clearing vegetation, clearing side drains, weeding ground ...	159 33	
	Proportion of cost of repairing hand carts	25 0	
	Transport of metal and repairing road	26 16	
	Clearing out drain	10 59	
	Superintendence	110 0	
			2,727 15
12.	*Seats, Public.*		
	Purchase of six seats and transport	220 0	
	36 lin. ft. of dressed stone and transport	28 25	
	Cost of lead	13 50	
	Fixing seats	2 65	
	Cleaning and oiling two seats	1 6	
	Replacing stolen bars of seat	20 26	
	Fixing guard railing	3 20	
			288 92
13.	*Trees and Plants* (Estimate 9).		
	Labour: attending plants, cutting branches, trimming hedges, and weeding	—	199 93
14.	Bridge near Library, payment of one-third estimated cost of widening bridge to Director of Public Works	—	2,166 66
15.	*Recreation Ground Extension* (Estimate No. 17).		
	Repairs to hand carts	288 70	
	Wages of guards in charge of prisoners and extra diet ...	370 5	
	Sundry materials	190 55	
	Tools	10 50	
	Survey fees	5 0	
	Provincial Engineer, to meet cost of transport of rails and trucks and fixing same	300 0	
	Printing notices	3 0	
	Wages of watchers at gates	87 46	
			1,255 26

		Rs. c.	Rs. c.
16.	*Streets and Roads* (Estimates 2, 3, 4, and 5).		
	457·60 cubes metal getting	2,552 10	
	447·40 cubes metal transported and piled	786 77	
	447·40 cubes metal consolidated	807 96	
	118¼ miles jungle cleared	685 47	
	125¼ miles drains cleared	1,398 75	
	131¾ miles sides reduced	1,448 49	
	Landslips removed	949 86	
	541 cubes gravel transported	819 76	
	71 lines roads broken up and gravelled	223 68	
	87 cubes gravel spread on footpaths and consolidated ...	36 47	
	94 lines side drains deepened	94 30	
	Repairs to cooly lines	306 48	
	Repairs to culvert and footbridge	139 29	
	Lowering sides of roads and gravelling	206 8	
	Proportion of cost of repairing tools	184 80	
	Proportion of cost of store and line watchers	226 50	
	Superintendence	284 0	
	Extras.		
	Estimate No. 2 :		
	Building side drains and steps, Gregory road, Cemetery road ...	127 40	
	Hire of bullocks for cutting grass	130 36	
	Estimate No. 4 :		
	New ladder for cutting creepers	9 98	
	Repairs to seats	2 12	
	Mileposts	7 50	
	Sweeping roads	82 79	
	Weeding round tanks	15 58	
	Estimate No. 5 :		
	Fixing mileposts	9 98	
	35 lines of path to Dodanwella repaired	140 41	
	Box for measuring metal	7 70	
	Clearing silt from grating, back of railway premises ...	45 67	
			11,730 25
17.	*Victoria Esplanade and Recreation Grounds* (Estimate 12).		
	Hire of bullocks and drivers for machines	518 49	
	Clearing vegetation and weeding grounds	128 55	
	Rolling ground	15 5	
	Deepening catchwater drain	66 89	
	Repairs to approach bridge	8 13	
	Repairs to mowing machine	27 53	
	Proportion of cost of repair of tools	38 74	
	Proportion of cost of repairing cooly lines	20 1	
	Superintendence	32 0	
			855 44
18.	*Sanitation* (Estimate A).		
	Clearing jungle and removing deposit of rubbish and silt in Meda-ela, Katugastota stream, lake outlet, and other drains ...	799 13	
	Removing rubbish and silt from moat of lake	66 0	
	Proportion of cost of repairing hand carts	50 0	
	Clearing jungle, rubbish, from back of premises No. 110, Colombo street	19 6	
	Superintendence	65 0	
			999 19
19.	*Meda-ela, clearing Silt* (Estmate No. 18).		
	Straightening channel and removing silt	414 80	
	Fixing posts to support bank	22 33	
	Clearing silt and sodding bank near footbridge	201 86	
	Superintendence	59 0	
			697 99
20.	*Clearing Side Drains of Streets, cleared for Sanitary Reasons* (Estimate B).		
	Clearing silt from sides of Trincomalee street, Ward street, Malabar street, and town streets	687 55	
	Proportion of cost of repair of hand carts ...	50 0	
	Superintendence	62 0	
			799 55
21.	*Tools* (Estimate 10).		
	Purchase of tools	—	400 15
22.	*Watering Streets* (Estimate 7).		
	Hire of bullocks and drivers	381 58	
	Repairs to carts	21 22	
	Proportion of cost of cooly lines	29 0	
	Proportion of cost of store and line watchers	46 81	
	Proportion of cost of repair of tools	41 35	
	Superintendence	30 0	
			549 96
23.	*Waterworks.*		
(*a*)	Care of mains, standposts, meters, house service pipes :—		
	Wages of plumbers, joint-makers, and coolies	3,152 29	
	Cleaning and painting standposts	50 13	
	Carried forward ...	3,202 42	

		Rs. c.	Rs. c.
	Brought forward ...	3,202 42	
Cost of mains purchased : Rail fare and cart hire		1,506 5	
Repairs to door of tower		8 0	
Wooden tops for standposts		4 74	
Procuring and fixing numbers to 83 standposts		58 10	
New tool cart		60 0	
Repairing manhole cover		2 58	
Repairs of hand cart		7 32	
Repairs of tools		38 74	
			4,887 95
(*b*) Repairs of buildings and approach road, painting ironwork :—			
Levelling site and cutting bank for cooly line		26 29	
Breaking down and removing old lines		2 72	
Building walls of cooly lines		94 91	
Bamboos for cooly lines		3 40	
Transport of stone for foundation		13 8	
Building pillars and walls		162 57	
Fitting roof and doors		112 64	
Foundation		67 90	
Whitewashing cooly lines		4 66	
			536 25
Constructing set of cooly lines (four rooms and verandahs) :—			
Repairs to masonry of dam		3 42	
Repairs to barrel drain, Peradeniya road, damaged by water from standpost		58 57	
Repairs to wheelbarrow		8 25	
			70 24
(*c*) Weeding round reservoir, care of trees :—			
Clearing jungle and weeding		692 44	
Supply of grass to cattle exposing shed		362 64	
Clearing boundary of strip of land through Hantane estate ...		52 57	
Transport of manure to grass land...		230 0	
Weeding round reservoir		86 63	
			1,424 28
(*d*) Clearing silt from storm channel :—			
Clearing silt, storm channel		530 42	
Clearing catchwater drains		54 56	
			584 98
(*e*) Extra :—			
Tracing of land adjoining reservoir		—	10 0
(*f*) Superintendence and watchers :—			
Overseer and two watchers		497 55	
Grass land watcher		153 30	
Watchers in town		292 0	
			942 85
(*g*) Cleaning and painting fountain		—	54 14
	Total ...	—	8,510 69

B.—Rainfall at Kandy.

Month.	1896.		1897.		1898.		1899.		1900.		1901.		1902.		Means during 33 Years.	
	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.
January ...	4·47	15	0·98	9	3·61	8	8·54	12	9·60	12	5·24	13	3·56	10	4·75	10
February ...	3·40	4	3·24	9	0·76	4	0·01	1	0·77	5	1·73	9	2·29	7	2·37	5
March ...	3·44	9	3·04	11	3·69	7	3·28	10	2·68	9	1·36	9	6·97	9	3·48	9
April ...	3·29	14	10·41	22	4·67	14	16·56	19	5·18	17	12·25	18	15·18	22	7·59	15
May ...	6·05	8	3·28	10	3·59	12	7·55	21	3·11	11	2·95	10	3·60	9	5·95	13
June ...	14·03	20	9·94	23	7·32	25	9·94	24	12·11	26	14·15	26	2·82	11	9·11	22
July ...	5·46	21	4·83	22	6·98	19	5·06	18	14·51	30	6·99	27	10·79	21	6 85	22
August ...	3·64	19	10·70	28	1·21	8	4·14	17	10·45	23	4·42	21	1·82	12	5·74	19
September ...	3·17	14	8·09	23	9·51	21	6·58	15	9·48	18	3·31	16	6·41	16	5·69	18
October ...	18·48	24	9·02	16	16·05	23	15·37	27	7·79	21	6·36	19	21·09	30	10·99	23
November ...	10·94	25	10·96	15	6·45	20	4·88	16	19·36	25	13·76	22	13·28	23	10·69	19
December ...	22·86	25	13·21	21	5·85	20	7·60	18	7·42	15	4·52	16	8·38	16	8·95	17
Total ...	99·23	198	87·70	209	69·69	181	89·51	198	102·45	212	77·04	206	96·19	186	82·16	192

Kandy Waterworks.

C.—Statement showing Rise and Fall in Level of Water in the Reservoir.

Year.	Fall commenced.	Lowest reached below Spill Level.	Filled up to Spill Level.
1884	January 20	April 29, 5 ft. 6 in.	October 26
1885	February 13	June 10, 8 ft. 6 in.	July 28
1886	March 8	May 29, 5 ft. 4 in.	July 6
1887	January 9	June 28, 17 ft. 0 in.	November 19
1888	March 6	June 6, 6 ft. 10 in.	August 3
	August 12	October 20, 5 ft. 6 in.	November 22
1889	February 1	June 12, 16 ft. 3 in.	September 14
1890	January 30	June 16, 14 ft. 3 in.	December 10
1891	January 27	May 17, 5 ft. 3 in.	June 10
	August 9	October 14, 4 ft. 0 in.	November 1
1892	—	June 28, 6 ft. 6 in.	October 23*
1893	January 21	June 12, 6 ft. 3 in.	December 13
1894	February 12	August 6, 19 ft. 1 in.	November 24
1895	January 27	June 17, 14 ft. 4 in.	November 1
1896	February 26	June 12, 6 ft. 10 in.	December 14
1897	February 17	June 22, 8 ft. 8 in.	October 3
1898	February 10	Sept. 23, 27 ft. 8 in.	Not filled up†
1899	February 28	April 11, 2 ft. 2 in.	June 1
	August 4	Sept. 17, 2 ft. 2 in.	October 29
1900	January 27	June 12, 12 ft. 0 in.	August 4
1901	February 10	June 7, 6 ft. 3 in.	July 18
	August 29	Nov. 5, 4 ft. 0 in.	December 2
1902	January 27	July 4, 8 ft. 8 in.	August 2
	August 3	Sept. 12, 9 ft. 7 in.	October 30

N.B.—The dam was raised at end of 1896 by 2 ft., making the spill level 49 ft.

* Owing to the breakage of the lifting rod of the sluice door, the reservoir emptied itself on January 18 and 19. On repairs being completed the reservoir commenced to fill on February 3, and the water continued to rise till April 7, when it was only 2 ft. 1 in. below spill level. Commenced to fall again on April 26.

† On December 31 the water was 2 ft. 11 in. below spill. With a few fluctuations it reached spill level on February 17.

Mahaiyawa General Cemetery.

D.—Burials in portions set apart for different Denominations from April 1, 1875, to December 31, 1902.

Denominations.	Total to December 31, 1901.	Average for 27 Years.	1902.
Episcopalians	739	27·37	26
Presbyterians	100	3·70	4
Wesleyans	228	8·44	6
Baptists	70	2·59	1
Dutch Presbyterians and Tamil Cooly Mission	96	3·55	5
Roman Catholics	1,975	73·14	105
Buddhists	4,902	181·55	225
Hindus	8,966	332 07	402
Mohammedans	2.382	88·22	101
Total	19,458	720·63	875

E.—Examination of a Sample of Drinking Water from a Public Standpipe.

Source and possibility of contamination: Standpipe in Ward street; no possibility of contamination.

Chemical and Physical Examination.

1. Colour in 6-in. column: colourless. Turbidity: clear.
2. Odour: odourless.
3. Residue left on evaporation: virtually none; did not char on heating.
4. Free ammonia: none.
5. Chlorine: less than 2 grains per gallon. Equivalent of common salt: about 3 grains per gallon.
6. Nitrites: none.
7. Nitrates: none.
8. Hardness: about 4 degrees.
9. Lead: none.
10. Zinc, iron, and copper: none.
11. Oxygen absorbed in 15 minutes at 212° F.: under ·05 grains per gallon.

From the examination of the source of the water herein referred to, and the results obtained by analysis, I am of opinion that it is a very pure water and well adapted for all domestic purposes.

ANDERSON SMITH,
Health Officer.

Kandy, July 13, 1902.

F.—Comparative Statements for the Years 1900, 1901, and 1902, showing the Number of Buckets Night Soil removed, Number of Cesspits emptied, Number of Private Houses and Government Buildings registered for removal of Night Soil, Number of Cesspits closed and Dry-earth Closets substituted, and Quantity of Disinfectants used.

1900.	Number of Private Houses and Government Buildings registered for removal of Night Soil.	Number of Cesspits emptied and Amount recovered.	Number of Buckets Night Soil removed and Fees recovered.	Disinfectants used for Public Latrines and Night Soil Carts.	Number of Cesspits closed and Dry-earth Closets substituted.
Total private houses and Government buildings	Govt. buildings 15 Private houses 235 250	—	—	—	—
	Public latrines 31				
Number of cesspits emptied ...	—	80	—	—	—
Amount recovered for emptying ...	—	Rs.1,215·03	—	—	—
Number of buckets removed ...	—	—	401	—	—
Amount recovered for removal ...	—	—	Rs.9,816·51	—	—
Quantity of disinfectants used ...	—	—	—	952 lb. C. powder, 65 gal. fluid	—
Cost of disinfectants	—	—	—	Rs. 494·75	—
Number of cesspits closed and dry-earth closets opened	—	—	—	—	65
1901.					
Total private houses and Government buildings	Govt. buildings 16 Private houses 259 275	—	—	—	—
	Public latrines 31				
Number of cesspits emptied ...	—	60	—	—	—
Amount recovered for emptying ...	—	Rs. 903·36	—	—	—
Number of buckets removed ...	—	—	424	—	—
Amount recovered for removal ...	—	—	Rs. 11,186	—	—
Quantity of disinfectants used ...	—	—	—	728 lb. C. powder, 56½ gal. fluid	—
Cost of disinfectants	—	—	—	Rs. 255·19	—
Number of cesspits closed and dry-earth closets opened	—	—	—	—	13
1902.					
Total private houses and Government buildings	Govt. buildings 16 Private houses 247 263	—	—	—	—
	Public latrines 31				
Number of cesspits emptied ...	—	55	—	—	—
Amount recovered for emptying ...	—	Rs.1,170·52	—	—	—
Number of buckets removed ...	—	—	435	—	—
Amount recovered for removal ...	—	—	Rs.9,609·37	—	—
Quantity of disinfectants used ...	—	—	—	672 lb. C. powder, 48 gal. fluid	—
Cost of disinfectants	—	—	—	Rs. 250·92	—
Number of cesspits closed and dry-earth closets opened	—	—	—	—	12

G.—Statement of Expenditure for the removal of Night Soil from Public Latrines and Private Houses for the Year 1902.

Number employed.	Description of Work.	Rate per Diem. Rs. c.	Amount. Rs. c.
17 ...	Night soil carters	1 0 ...	6,205 0
1 ...	Blood carter	1 0 ...	365 0
18 ...	Night soil coolies	0 45 ...	2,956 50
17 ...	Latrine coolies	0 37 ...	2,295 85
1 ...	Nuisance watcher	0 50 ...	182 50
1 ...	Pit watcher	0 75 ...	273 75
1 ...	Kangany	0 50 ...	182 50
1 ...	Cooly to Inspector at nights... ...	0 45 ...	182 50
1 ...	Inspector's salary	— ...	964 0
— ...	Disinfectants, lighting, lanterns, and sundries	— ...	701 52
— ...	Repairs to carts and drums	— ...	1,981 11
— ...	New drums	— ...	652 50
— ...	Buckets	— ...	10 82
— ...	Contingencies (printing, &c.) ...	— ...	82 60
— ...	Extra night soil carters and coolies, also Inspector for supervision during perahera ...	— ...	61 35
— ...	Office scavenging	— ...	24 0
— ...	New carts and poles	— ...	660 0
— ...	Latrine and ash boxes	— ...	56 0
— ...	Unslaked lime	— ...	—
			17,837 50

H.—List of Registered Burial Grounds.

1. General Cemetery, Mahaiyawa.
2. Katukele Cemetery.
3. Wagolla Cemetery.
4. Getambe Cemetery (heathens).
5. Mulgampola Cemetery.
*6. Ampitiya Cemetery (for burial of Papal Seminary inmates).
7. Katukele Convent Cemetery.
8. Yatiyawala Cemetery.
*9. Tennekumbura Cemetery.
10. Wahalewela Cemetery.
11. Getambe Cemetery (Christians, C. E.).

* Owing to the alteration of the limits of the Kandy Municipality in March, 1902, Ampitiya and Tennekumbura cemeteries have been struck off our register as they now stand outside our limits.

I.—List of Letters received from the Hon. the Colonial Secretary during 1902.

No.	Date. 1902.		Subject.
1	January	10 ...	Intimating the sanction by His Excellency the Governor in Executive Council of the taxes proposed to be levied during 1902, as conveyed in Chairman's letter No. 51 of December 28, 1901.
2	January	10 ...	Intimating the sanction by His Excellency the Governor in Executive Council the levy during 1902 of a police and lighting rate of 6 per cent., as per Chairman's letter No. 50 of December 28, 1901.
3	January	23 ...	Forwarding draft of Ordinance to amend "The Municipal Councils' Ordinance, 1887, 1890, and 1896" for opinion of Members.
4	January	27 ...	Intimating the approval by His Excellency the Governor in Executive Council of the proposed alteration of the limits of the Municipality.
5	February	2 ...	Forwarding Proclamation *re* Municipal limits to be perfected and returned.
6	February	1 ...	Intimating that Mr. Kanakasundra's name has been noted for employment under Government.
7	February	1 ...	Respecting the furnishing of a printed copy of by-laws as per section 7 of Ordinance No. 8 of 1901. (Calls attention to No. 10 of June 19, 1901.)
9	February	7/8 ...	Calling attention to letter No. 10 of June 19, 1901.
10	February	26 ...	Intimating that the Governor in Executive Council has confirmed the amendment of by-law 3 (*d*) of May 17, 1898, and requesting to be furnished with the necessary Proclamation.
11	February	28 ...	Intimating that the Governor in Executive Council has confirmed the proposed amendment of by-laws Nos. 15 and 18, and returns Proclamation to fill in schedule and to furnish translations of the proposed amendments.
12	March	6/7 ...	Requesting, with reference to letter No. 10 of February 26, 1902, to furnish translations of the amended by-law.
13	April	3 ...	Stating that the Firearms Ordinance is to be brought into operation within the Municipality.
14	April	3 ...	Intimating the nomination by the Governor of Mr. Mottau as Auditor.
15	April	9 ...	Intimating that it has been decided to bring the Ordinance for registration of dogs into operation in the town of Kandy, and requesting draft of Proclamation.
16	May	15 ...	Requesting to furnish Sinhalese and Tamil translations of by-law 3 (*d*) of chapter XIII. *re* night soil charges.
17	May	30 ...	Inviting attention to letter No. 16 of May 15, 1902.
18	June	2 ...	Intimating the approval by His Excellency the Governor of the limits of the divisions of the Municipality being altered as proposed.
19	June	5 ...	Requesting a translation in Sinhalese and Tamil of the Proclamation relating to the amendment of the carriage by-laws.
20	June	6 ...	Forwarding copy of Ordinance No. 7 of 1902 to amend "The Municipal Councils' Ordinances, 1887, 1890, and 1896."
21	June	17 ...	Stating that the Proclamation relating to the alteration of the limits of the divisions of the Municipality will be duly published, the alterations taking effect from July 1, 1902.
22	June	25 ...	Acknowledging receipt of parcel containing the address of congratulation from the Municipal Council to His Majesty the King, and stating that the address will be sent to Sir J. West Ridgeway for presentation.
23	July	7 ...	Stating that the Postmaster-General has been instructed to include for consideration in his estimates for next year the cost of erecting three additional pillar-boxes and salaries of additional postmen and cost of establishing a post office at Katugastota.
24	July	18 ...	Respecting the scavenging of streets.
25	July	29 ...	Calling attention to letter No. 19 of June 5, 1902.
26	July	31 ...	Respecting the appointment of Mr. S. C. Kanakasundra to the shroffship of Mullaittivu Kachcheri.
27	August	11 ...	Returning the Proclamation respecting the night soil by-laws to insert date from which it is to take effect.
28	August	13 ...	Returning the Proclamation respecting the fares for licensed carriages for insertion of the date from which it is to take effect.
29	August	20 ...	Intimating sanction by the Lieutenant-Governor in Executive Council of the water supply by-laws, and requesting to be furnished with translations in Sinhalese and Tamil.
30	September	1 ...	Inviting attention to Circular No. 68 of July, 21, 1902, *re* issue of the *Government Gazette*.
31	September	15 ...	Respecting the scavenging of the streets of Kandy.
32	September	25 ...	Forwarding copy of the Official Catalogue of the Exhibition of Gifts and Addresses presented to Their Royal Highnesses the Prince and Princess of Wales on their Tour through the Colonies.
34	October	24 ...	Respecting condition of drains in the alleys in Kandy.
35	October	24 ...	Respecting the scavenging of Kandy town and the unsatisfactory state of alleys.
36	October	25 ...	Refusing to grant the Council the proceeds of the Ampitiya and Gurudeniya toll after February 28, when limits were altered, whereby the toll was excluded.
37	December	6 ...	Intimating that the annual instalment of Rs. 4,000 due on loan for improvement of Victoria drive has been reduced to Rs. 2,000 and the time for settlement of loan extended by six years.
38	December	31 ...	Intimating that the Governor has been pleased to nominate the following gentlemen to be members of the Municipal Council, with effect from January 1, 1903: W. D. Gibbon, Esq., Dr. D. J. Craib, and L. Creasy, Esq.

J.—Budget for 1903 (submitted to and approved of by the Standing Committee).

Revenue.	Estimated Receipts for 1903. Rs. c.	Total. Rs. c.
Arrears.		
Scavenging, commutation, &c.	—	1,500 0
Cemetery Account.		
Fees and graves	—	950 0
Commutation Rate.		
Rate	—	10,250 0
Interest.		
From tolls ...	—	75 0
Judicial Account.		
Municipal Court fines ...	1,800 0	
Police Court fines ...	850 0	
		2,650 0
Licenses.		
Auctioneers	240 0	
Dangerous and offensive trades ...	625 0	
Opium	7,000 0	
Sundries	75 0	
		7,940 0
Miscellaneous Receipts and Charges.		
Badges	165 0	
Sundries	125 0	
		290 0
Pensions.		
Share by Nos. 2 and 3 accounts ...	—	540 0
Office Charges.		
Share by Nos. 2 and 3 accounts	5,985 0	
Amount due by commutation rate	240 0	
		6,225 0
Public Market.		
Monthly rents	9,500 0	
Daily rents	4,100 0	
Lighting	2,015 0	
Costs	150 0	
		15,765 0
Rents.		
From cattle shed ...	600 0	
From lands and spaces ...	450 0	
From Town Hall... ...	250 0	
From vegetable market ...	250 0	
		1,550 0
Scavenging.		
Bucket fees	—	9,434 0
Slaughter-houses.		
Fees from cattle... ...	5,000 0	
Fees from sheep and goats ...	550 0	
		5,550 0
Stamp Duties.		
Carriages	1,800 0	
Carriers	400 0	
Hotels	3,100 0	
Liquor	2,800 0	
Proctors	405 0	
Notaries	70 0	
Butchers	200 0	
Taverns	3,500 0	
Poisons	30 0	
Firearms	45 0	
		12,350 0
Taxes.		
On bullocks	300 0	
On dogs	200 0	
On vehicles and animals ...	850 0	
		1,350 0

Expenditure.	Estimated Expenditure for 1903. Rs. c.	Total. Rs. c.
Arrears.		
Commission, wages, &c. ...	—	150 0
Cemetery Account.		
Establishment Rs. 960, tools, &c., Rs. 50	—	1,010 0
Commutation Rate.		
Commission	650 0	
Advertising	50 0	
Serving and collecting schedules...	50 0	
Peons Rs. 140, supervision, &c., Rs. 240	380 0	
Books and forms ...	150 0	
Contingencies	20 0	
		1,300 0
Government Loans.		
Repayment—drainage ...	306 0	
Lake and Victoria drive ...	4,000 0	
		4,306 0
House of Shelter.		
Wages, &c.	—	150 0
Interest.		
Four per cent. on Government loans	1,412 0	
To bank	100 0	
		1,512 0
Judicial Account.		
Establishment Rs. 1,850, printing Rs. 75	—	1,925 0
Legal Expenses.		
Yearly retainer, &c. ...	—	100 0
Licenses.		
Printing and advertising ...	—	60 0
Miscellaneous Receipts and Charges.		
Badges, tin plates, &c. ...	200 0	
Sundries	50 0	
Fire engine	175 0	
		425 0
Pensions.		
For four pensioners ...	—	1,350 33
Office Charges.		
Establishment Rs. 10,730, audit Rs. 250	10,980 0	
Stationery and books ...	550 0	
Stamps	100 0	
Furniture	50 0	
Advertising	80 0	
Sundries	150 0	
Printing	60 0	
		11,970 0
Public Market.		
Establishment	972 0	
Commission	350 0	
Books and forms... ...	175 0	
Sundries	60 0	
Lighting	2,550 0	
		4,107 0
Rents.		
Expenses on account cattle shed...	400 0	
Expenses on account Town Hall...	250 0	
Rent of lands	93 88	
Sundries	16 12	
		760 0
Sanitation Account.		
Establishment	5,500 0	
Disinfectants, removing patients, pauper burials, &c. ...	150 0	
Work recommended by Health Officer	900 0	
Clearing side drains of town ...	800 0	
		7,350 0
Scavenging.		
Removal of night soil ...	19,525 55	
Sweeping and clearing streets, &c.	10,850 0	
Opening pits, &c. ...	2,730 0	
		3,310 55

Revenue.		Estimated Receipts for 1903. Rs. c.	Total. Rs. c.
Tolls.			
Bogambara ...	...	40 0	
Gonawatta and Talatu-oya	...	5,350 0	
Halolluwa ...	...	495 0	
Illukmodara and Kundasale	...	780 0	
Lewella ...	...	3,910 0	
Peradeniya and Eriyagama	...	2,907 0	
Katugastota ...	...	8,500 0	
			21,982 0
Public Works.			
Government contribution	...	850 0	
Recreation ground rents	...	300 0	
Rent of perahera booths	...	150 0	
			1,300 0
Total ...		—	99,701 0

Expenditure.		Estimated Expenditure for 1903. Rs. c.	Total. Rs. c.
Slaughter-houses.			
Establishment ...	...	738 0	
Feeding cattle ...	...	850 0	
Books and forms	...	100 0	
Sundries ...	...	50 0	
			1,738 0
Stamp Duties.			
Commission 5 per cent.	...	625 0	
Sundries ...	...	50 0	
			675 0
Taxes.			
Expenses on account dogs	...	500 0	
Expenses on account vehicles and animals ...	...	80 0	
			580 0
Time Charges.			
Wages, powder, &c.	...	—	450 0
Tolls.			
Repair of boats Rs. 1,492·60 and approaches Rs. 465·90	...	1,958 50	
Sundries ...	...	50 0	
			2,008 50
Volunteer Band.			
Contribution ...	...	—	1,200 0
Lake Silt.			
Per estimate ...	...	—	1,700 0
Public Works.			
Orderly Rs. 121, printing Rs. 110		231 0	
Sick pay and medical aid	...	300 0	
Erecting Perahera booths	...	100 0	
			631 0
Amount of Schedule A	...	—	21,122 0
Balance ...	...	—	15 62
Total	...	—	99.701 0

Assessment Tax.

Revenue.		Estimated Receipts for 1903. Rs. c.	Total. Rs. c.
On town properties	...	23,163 0	
On village ...	...	3,928 0	
Government payment	...	7,064 0	
			34,155 0
Arrears ...	...	—	3,700 0
			37,855 0

Expenditure.		Estimated Expenditure for 1903. Rs. c.	Total. Rs. c.
Assessment Tax.			
Arrears—commission, advertising, &c. ...	...	—	125 0
Charges for 1903.			
Establishment, &c.	...	2,992 50	
Commission at 4 per cent.	...	750 0	
Books and forms...	...	250 0	
Peons ...	...	120 0	
Writing receipts...	...	70 0	
Contingencies ...	...	27 0	
			4,209 50
Street lighting ...	...	19,600 0	
Street names ...	...	450 0	
Maintenance of police	...	13,000 0	
Interest to bank...	...	375 0	
			33,425 0
			37,759 50
Balance ...	...	—	95 50
			37,855 0

WATER RATE.

REVENUE.	Estimated Receipts for 1903. Rs. c.	Total. Rs. c.
Rate on town properties ...	21,342 0	
Government payment ...	7,696 0	
		29,038 0
Sale of grass	850 0	
House service	400 0	
Rent of meters... ...	100 0	
Water in excess... ...	100 0	
Water sold	2,000 0	
		3.450 0
Fairieland and Roseneath ...	—	12,680 0
Hermitage rent	—	480 0
Arrears	—	1,500 0
		47,148 0

EXPENDITURE.	Estimated Expenditure for 1903. Rs. c.	Total. Rs. c.
Arrears	—	100 0
Charges for 1903.		
Establishment, &c. ...	2,992 50	
Commission at 3½ per cent. ...	650 0	
Books and forms... ...	175 0	
Peons	120 0	
Writing receipts	35 0	
Contingencies	28 0	
		4,000 50
Maintenance of works and fountains	5,345 0	
House service	600 0	
Meters	400 0	
		6,345 0
Interest to bank	900 0	
Interest and sinking funds ...	16,260 0	
		17,160 0
Fairieland and Roseneath ...	—	11,016 0
Hermitage bungalow ...	—	50 0
		38,671 5
Balance	—	8,476 5
		47,148 0

SCHEDULE A.

Estimates for 1903.

Est. No.	Description of Work.	Rs. c.	Rs. c.
1	Upkeep of pavements and drains	2,635 50	2,400 0
2	Town streets	7,924 7	6,900 0
3	Alutgantota and Lady Anderson's roads ...	816 36	700 0
4	Udawattekele roads and paths	1,992 37	1,800 0
5	Halolluwa, Bahirowakanda, and other roads ...	2,043 15	1,800 0
6	Municipal buildings	2,070 0	1,880 0
7	Watering streets	856 0	700 0
8	Market buildings and premises	1,713 0	1,600 0
9	Ornamental plants	200 0	100 0
10	Tools	500 0	400 0
11	Maintenance of bathing and dhobies' tanks ...	210 0	210 0
12	Victoria esplanade and recreation grounds ...	946 0	946 0
13	Sundry minor works	600 0	300 0
14	Repairing cemetery-keeper's house	100 0	50 0
15	Castle Hill park	556 0	556 0
16	Recreation ground improvements	580 0	580 0
17	Carriage stand repairs	308 0	200 0
	Total ...	24,050 45	21,122 0
A	Sanitation account	968 0	900 0
B	Clearing side drains of town	874 0	800 0
C	Opening pits, covering pits	2,730 0	2,730 0
D	Ferry approaches	465 90	465 90
E	Ferry boat repairing	578 60	578 60
F	Repairing ferry boat, Gonawatta	914 0	914 0
G	Lake silt	2,000 0	1,700 0
	Total ...	8,530 50	8,088 50

Taxes proposed to be levied in 1903 in terms of Section 110 (*c*) of Ordinance No. 7 of 1887.

Description of Taxes.	Maximum leviable under the Ordinance.	Amount at present levied.	Amount proposed to be levied in 1903.	Authority under which levied.
Consolidated rate for police and lighting	—	6 per cent. on annual value of property	6 per cent. on annual value of property	Section 127 of Ordinance No. 7 of 1887
Water-rate	—	do.	do.	Section 5 of Ordinance No. 18 of 1884
	Rs. c.	Rs. c.	Rs. c.	
Carriages other than carts ...	5 0 each	5 0 each	5 0 each	Section 128 of Ordinance No. 7 of 1887
Carts or hackeries	4 0 „	4 0 „	4 0 „	
Jinrickshas	2 50 „	2 50 „	2 50 „	
Horses, ponies, or mules ...	2 50 „	2 50 „	2 50 „	
Bullocks or asses	1 0 „	1 0 „	1 0 „	
Dogs	1 50 „	1 0 „	1 0 „	Section 129 of Ordinance No. 7 of 1887
Commutation of labour ...	2 50 „	2 0 „	2 0 „	Section 130 of Ordinance No. 7 of 1887

The Chairman, in submitting the Budget for 1903, read the following memorandum :—

In submitting the Budget for 1903 I have to point out—

In respect of the general revenue that the estimated revenue is Rs. 99,701. After providing for the cost of establishments, commission on collections, scavenging Rs. 33,105·55, clearing silt from lake Rs. 1,700, sanitation Rs. 7,350, maintenance of ferry boats and approaches Rs. 2,008·50, Public and Volunteer band Rs. 1,200, payment instalments and interest on loans Rs. 5,818, maintenance of market and lighting Rs. 4,107, there is a probable estimated balance available of only Rs. 21,127. The estimates submitted for maintenance of streets, roads, paths, buildings, &c., amount to Rs. 24,050. It has been necessary to reduce several estimates as detailed in the schedule, and the total sum has been reduced to Rs. 21,122.

Estimates have been submitted for sundry necessary works recommended from time to time, amounting approximately in all to Rs. 45,000, such as drains round the market; concrete drains, Railway approach road, Palace square, and other localities; renewing barrel drains in Colombo street; concreting pavements, Colombo street; retaining walls, Victoria drive and Lady Torrington road; Illukmodara ferry; repair of culverts, Halolluwa road; additional tanks for use of dhobies; survey of recreation ground; ventilating shafts on barrel drains and main sewer; repairs, &c., house of shelter (Deyannewela); new set of cooly lines at Bogambara, drains round cooly lines, and latrines; improvement of market stalls; colour-washing and repairs of the cemetery wall; and several other miscellaneous works. There is, however, no sum available to provide for cost of any of these at present. They are all necessary, and should be provided for before the question can be entertained of launching out into the construction of new roads and paths, which may be regarded as luxuries rather than necessities.

I am glad to state that it has been intimated that His Excellency the Governor has been pleased, subject to the sanction of the Secretary of State, to adopt the suggestion of my predecessor, that the annual instalment for repayment of the loan obtained for improvement round the lake be reduced by Rs. 2,000, on the understanding that this amount be expended annually for purpose of certain sanitary improvements, such as construction of concrete drains, pavements, barrel drains.

This sum will in a small measure meet the cost of several very necessary works.

	Rs.
Police assessment account No. 2 :—	
The estimated revenue during 1903	37,855
The estimated expenditure	37,759
Water-rate account No. 3 :—	
Estimated receipts	47,148
Estimated expenditure	38,671

leaving a probable balance in the year's working of Rs. 8,476, which will only clear off, or at any rate materially reduce, the existing debt on the account which at commencement of 1902, viz., Rs. 12,109·23.

This probable balance includes as an estimated profit in working of the Roseneath and amalgamated estates of Rs. 2,000.

The Council then went into Committee and considered the Budget (Appendix A). On Council resuming, it was proposed by Mr. Vanderwall, seconded by Mr. Sproule—That the Budget for 1903 be approved and adopted.

This was unanimously agreed to.

Confirmed this 17th day of January, 1903 :

J. P. LEWIS,
Chairman.

REPORT OF THE SPECIAL COMMITTEE.

REPORT of the Special Committee appointed to consider and Report on the Chairman's Administration Report for the Year 1902.

THE Administration Report under consideration is a full and exhaustive one, while the appendices contain statistical information of much value on many subjects of Municipal administration.

2. *Electric Lighting.*—We would suggest the insertion in the report of the cost of lighting last year in streets and at market, also the total number of lamps in use at present. This will be useful to compare with the cost of previous years.

We observe with regret that scientific means of testing the candle power of the electric light is still not available.

3. *Drainage Scheme.*—It will, we think, be desirable in referring to Mr. Robins' work to add that Mr. Robins was employed "at the instance of the Municipal Council."

Also to add in the report the cost of the scheme of the Director of the Public Works Department.

4. *Police.*—We would recommend the addition of the comparative cost of police for last year.

5. *Assessment.*—We deprecate the methods adopted at the last general assessment of properties within the Municipality for purposes of taxation. There can be no doubt the assessment gave much dissatisfaction to numerous householders and owners, as is proved by the large number of petitions for reduction of assessment values; there were no less than 944 premises in respect of which objections were made, and the fact that in about half the number (467) reductions were made in assessment, illustrates, alike, that the taxpayers had substantial grievances, and that the assessors

appointed were neither efficient nor careful. It is to be hoped that greater circumspection will be exercised in future in the selection of properly qualified assessors.

6. *Postal Facilities.*—The extension of postal facilities is much needed. The removal of the Central Post Office to a more distant locality accentuates this need. Such districts as Mahaiyawa and Katugastota are, it may be said, without such facilities at all. A branch post office in a central position in Kandy is strongly recommended.

The Special Committee, in closing their report, beg to be allowed to record their appreciation of the valuable and interesting report for 1902 of the Chairman of the Municipal Council of Kandy.

J. H. EBELL.
RICH. JONKLAAS.
C. VANDERWALL.
J. H. SPROULE.

Kandy, August 22, 1903.

RESOLUTION OF THE COUNCIL.

Copy of Resolution adopted at Meeting on Saturday, September 19.

"That the report just read be appended to the Chairman's Annual Report."—Carried *nem. con.*

H. BYRDE,
for Chairman.

XXXI.—1903.

ADMINISTRATION REPORT

OF

THE MUNICIPAL COUNCIL OF GALLE

FOR THE YEAR

1902.

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 20 cents.

1903.

THE MUNICIPALITY OF GALLE.

REPORT OF THE CHAIRMAN FOR 1902.

CONSTITUTION OF COUNCIL.

THE Council was constituted as follows at the beginning of the year :—

G. M. Fowler, Esq., Chairman.	Dr. E. Ludovici.
H. A. G. Grant, Esq., Provincial Engineer.	D. G. Goonewardene, Esq.
Dr. W. G. Keith.	N. Dias Abeyesinhe, Esq.
C. P. Hayley, Esq.	Dr. P. D. Anthonisz, C.M.G.
Magdon Ismail, Esq.	F. Abeyesundera, Esq.

The Chairman, G. M. Fowler, Esq., left in February, and was succeeded by H. W. Brodhurst, Esq. Dr. Keith went on furlough in March, and Dr. W. E. Rudd was nominated in his place. H. A. G. Grant, Esq., left for England, and was succeeded by F. J. Pigott, Esq.

In terms of section 88 of the Municipal Councils' Ordinance, the Council at a meeting held on 18th January, 1902, elected a Standing Committee, and the ballot taken resulted in the election of—

The Provincial Engineer.	D. J. Goonewardene, Esq.
The Colonial Surgeon.	Dr. E. Ludovici.
N. Dias Abeyesinhe, Esq.	

During the year twelve General Meetings and two Special Meetings were held. The attendance of members at these meetings was as follows :—

	General.	Special.
The Chairman	12	2
Dr. W. G. Keith	1	—
Dr. W. E. Rudd	5	—
H. A G. Grant, Esq.	2	—
F. J. Pigott, Esq.	2	—
C. P. Hayley, Esq.	8	2
M. Ismail, Esq.	11	2
Dr. E. Ludovici	11	2
D. G. Goonewardene, Esq.	11	1
N. Dias Abeyesinhe, Esq.	8	1
Dr. P. D. Anthonisz	10	1
F. Abeyesundera, Esq.	5	1

The attendance of members at meetings of the Standing Committee was as follows :—

The Chairman	12
Dr. W. G. Keith	1
Dr. W. E. Rudd	4
H. A. G. Grant, Esq.	2
F. J. Pigott, Esq.	4
Dr. E. Ludovici	10
D. G. Goonewardene, Esq.	12
N. Dias Abeysinhe, Esq.	8

REVENUE AND EXPENDITURE.

The revenue of the year from all sources was Rs. 91,652·67. When the balance brought forward from the previous year is added, the amount available for Municipal purposes was Rs. 102,965·74. Compared with the revenue of 1901 there was an increase of Rs. 8,457·93. The increase was chiefly in taxes, stamp duties and fees, markets, fines and rents.

Revenue of 1902 and 1901.

	1902. Rs. c.	1901. Rs. c.
General Account	75,775 30	67,122 53
Assessment Account	11,625 91	11,852 79
Waterworks Account	4,251 46	4,217 42
Total ...	91,652 67	83,192 74

The expenditure of the year amounted to Rs. 93,022·46, being Rs. 986·82 less than that of the previous year. In the General and Assessment Accounts there were increases respectively of Rs. 1,981·30 and Rs. 247·31. The Waterworks Account shows a decrease of Rs. 3,215·42, as in 1902 only six months' interest on loan was paid, whilst in 1901 interest for the whole year was paid up. The increase of expenditure was mainly on sanitary charges, the working of the Health Department and Public Works.

Expenditure of 1902 and 1901.

	1902. Rs. c.	1901. Rs. c.
General Account ...	78,196 6	76,214 76
Assessment Account ...	11,188 95	10,941 64
Waterworks Account ...	3,637 45	6,852 88
Total ...	93,022 46	94,009 28

An abstract of receipts and disbursements under General Account is appended :—

GENERAL REVENUE AND EXPENDITURE.

Revenue.

	1901. Rs. c.	1902. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Taxes ...	18,299 96	19,180 27	880 31	—
Tolls ...	16,491 34	14,875 23	—	1,618 11
Stamp duties and fees ...	13,547 2	20,002 22	6,455 20	—
Market licenses ...	9,806 60	11,789 55	1,982 95	—
Slaughter-house licenses ...	1,284 64	1,323 56	38 92	—
Miscellaneous licenses ...	388 25	372 50	—	15 75
Fines ...	1,559 33	2,474 55	915 22	—
Rents ...	307 0	409 0	102 0	—
Miscellaneous ...	5,139 39	5,093 42	—	45 97
Cemeteries ...	299 0	257 0	—	42 0
	67,122 53	75,775 30	10,374 60	1,721 83
		Deduct Decrease ...	1,721 83	
		Net Increase ...	8,652 77	

Expenditure.

	1901. Rs. c.	1902. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Establishment ...	4,914 88	4,936 88	22 0	—
Pensions ...	1,544 99	1,484 99	99 40	—
General office expenses ...	1,174 46	1,117 92	—	56 19
Revenue services ...	1,424 81	1,639 57	214 76	—
Lighting ...	5,191 94	4,903 75	—	288 19
Sanitary charges ...	12,037 69	12,421 86	384 17	—
Health Department ...	7,252 67	9,285 31	2,032 64	—
Market charges ...	838 63	941 0	102 37	—
Slaughter-house charges ...	785 94	846 84	60 90	—
Miscellaneous ...	13,163 21	9,627 71	—	3,535 50
Public works ...	26,956 65	30,020 56	3,063 91	—
Cemeteries ...	928 89	869 67	—	59 22
	76,214 76	78,196 6	5,920 75	3,939 45
		Deduct Decrease ...	3,939 45	
		Net Increase ...	1,981 30	

Detailed accounts will be found in the appendix.

NOTES ON REVENUE (*vide* Appendix A).

Vehicle and Animal Tax.—Increase of Rs. 544·75 due to increased number of vehicles and to the recovery of the tax from vehicles used for hire.

Road Tax.—Increase Rs. 536·50 ; larger recoveries.

Gintota Toll.—Decrease Rs. 2,253·74 ; arrears due not yet recovered. Case pending.

Stamp Duties.—The increases and decreases are due to the altered stamp duties under Ordinance No. 9 of 1901 :—

License to a carriage in 1901 was Rs. 10 ; in 1902, Rs. 15.
License to a cart with two bulls in 1901 was Rs. 4 ; in 1902, Rs. 4.
License to a hackery with one bull in 1901 was Rs. 5 ; in 1902, Rs. 2.
License to a jinricksha in 1901 was Rs. 10 ; in 1902, Rs. 5.

The stamp duty on carts in 1902 was for half the year only.

Opium.—Sale for 1902 made at the end of 1901 was credited to 1902. Hence the increase under this head.

Market Licenses.—Increase of Rs. 1,294·20 was caused by larger amounts realized at sale of rents, in the case of the fish market and fish auction shed and fruit market, while a larger number of stalls in other markets were occupied.

Judicial Fines.—Increase of Rs. 916·72.

Fees for working Private Latrines.—Increase Rs. 534·80, due to larger number of houses in the Fort adopting the dry-earth system.

NOTES ON EXPENDITURE (*vide* Appendix B).

Establishment.—Increase Rs. 22. Pay of cooly increased.

Pensions.—Increase of Rs. 40. A cooly was granted a compassionate allowance of Rs. 5 a month.

Lighting.—Decrease due to reduced contract for lighting.

New Lamps.—Increase Rs. 368·32. Ten new lamps were procured in 1902.

Scavenging Fort.—Increased payment for bulls. A kangany and additional boys employed.

Conservancy of Public Latrines.—Decrease of Rs. 190·49 arose from re-arrangement of the staff.

Conservancy of Private Latrines.—Increase of Rs. 288·67. Pay of increased staff to work increased number of houses using the dry-earth system.

Market Coolies.—Increase Rs. 102·37. Pay of bazaar market cooly increased and a cooly appointed to Kaluwella market.

Upkeep of Clock Tower.—Decrease Rs. 137·35. In 1901 certain repairs were made to the clock tower.

Acquisition of Land.—Decrease Rs. 3,227·36. Land for the Kaluwella markets was acquired in 1901, and the greater portion of the compensation was paid in that year.

Interest on Loans.—In 1901 more than one payment was made. Hence decrease of Rs. 556·19.

Upkeep of Bridges.—In 1901 the Miliduwa bridge was renewed, and the expenditure of that year exceeded that of 1902 by Rs. 1,231·22.

Improvement of Municipal Buildings.—The fish market roof was renewed in 1902.

Improving Drainage, Fort.—Increase Rs. 642·91. Middle street, Pedlar street, Rampart street, and Church street drains were improved.

Additional Latrines.—Two Horbury's latrines were erected.

Assessment Account.—Particulars are given in Appendix C. Collection of tax amounted to Rs. 15,172·78, being Rs. 684·27 more than the amount collected in 1901. The expenditure was Rs. 11,188·95, being Rs. 247·31 in excess of expenditure in 1901.

Waterworks Account.—Particulars are shown in Appendix D. The decrease mainly arose from interest on loan being paid in 1902 for only one half-year.

Loan Account.—Full particulars will be found in Appendix E.

PUBLIC WORKS.

Roads.—The permanent repair of roads included the metalling 183 lines of road with 504 cubes of metal and gravelling 38 lines.

The general upkeep included—

Patching ruts, 293 squares and 1 line.	Gravelling; 70 squares and 12½ lines.
Clearing jungle on sides of roads, 444⅘ lines.	Patching wheel tracks, 8 lines.
Trimming sides of roads, 2,033½ lines.	Removing nine landslips.
Clearing side drains, 1,118 lines.	Lopping branches of trees; 76 lines.

Upkeep of Bridges and Culverts.—The wooden bridge on Wakwella road was converted into a culvert. The culverts at Kitulampitiya road, at Circular road, and Hirumbura road were repaired. The footbridge leading into the Park was repaired.

Renewal of Bridges.—The Attoya and Miliduwa bridges were rebuilt.

Upkeep of Municipal Buildings.—The following were repaired:—

Fort market.	Refuse meat market.
Betel shed near Old gate.	Coal shed latrine.
Betel shed near District Court.	Fish market.
Pavilion.	Municipal Office.
Railway station latrine.	

The following buildings were improved:—

Renewed roof of fish market.
Coal shed latrine.

Improving Drainage, Fort.—Repaired Rampart street drain, Pedlar street drain, Church street drain, Leyn Baan street drain. Built a new drain in Middle street. Improved manholes to sewers.

Improving Drainage, Suburbs.—Repaired Green market drains, Bazaar mosque drain, Fowl street drain, Ward street drain. Built drains round Kaluwella market.

Minor Works.—Provided a galvanized roof to workshop. Repaired garden seats and fire engine. A new tennis court in Victoria park.

Two Additional Latrines (Horbury's patent) were erected, one at China Garden and the other at Wallawwegodella. Hume road was improved.

Shade Trees.—Sixty-three tree guards were made, and trees planted in the Fort and suburbs.

A new Market was built at Kaluwella with stalls for sale of vegetables, fish, beef, and mutton, at a cost of Rs. 2,994·10.

A new Cattle Shed was erected in the cattle pound at a cost of Rs. 1,247·75.

The Carriage Stand at Galle bazaar was paved with wedged stones, and the one at the railway station metalled.

Granite Seats were provided at the Victoria park.

Sea-bathing Places.—The steps to both the sea-bathing places were improved.

The Keppu-ela embankment at Havelock place was repaired.

A Cart and Cage for destroying dogs was procured.

Plague Hospitals at Dadalla were repaired and a storeroom built.

PUBLIC HEALTH.

General Health.—Good.

Chickenpox prevailed in all the wards during the first and second quarters of the year. The spread of the disease was caused by want of efficient isolation. The Sanitary Officer remarks, "We have no power to remove cases of chickenpox without the consent of the patient.....Unless the authority to remove patients to hospital when necessary is extended to every infectious, contagious, or epidemic disease, our power for the prevention of epidemics and doing good will be greatly crippled."

Infectious Diseases Hospital.—Correspondence on this subject was carried on for some time between the Council, the Government, and the Colonial Surgeon. In March, 1902, the Colonial Secretary wrote that "the Governor has decided that the Municipal Council should provide its own Infectious Diseases Hospital." In reply the Municipal Council pointed out that the Colombo and Kandy Councils contribute nothing towards either providing hospitals or maintaining them, and asked for a reconsideration of the Governor's decision, adding that "it is not understood on what grounds the Council is called upon to meet a charge from which the Municipalities of Colombo and Kandy are exempted."

The Colonial Secretary replied by order of the Lieutenant-Governor that "the Government considers that the provision of Infectious Diseases Hospitals is the duty of the Municipality." It then went on to justify the concessions granted to Colombo and Kandy, and added, "The special concessions in no way indicate that the Government recedes at all from its position that the Municipal Councils are responsible for the provision of proper accommodation for the treatment of infectious diseases."

The Chairman was requested by the Council to represent the matter again to Government. He did so, with the result that the Government instructed the Director of Public Works to furnish an estimate of the cost of providing the Municipal Council, Galle, with temporary accommodation for the treatment of infectious diseases till such time as Bathfield House, &c., which are now reserved for plague purposes, are again available.

SANITATION.

The scheme formed in 1899 to open out streets in the Fort and alleys branching off from them to give access to the back premises of houses, so that the dry-earth system of conservancy may be applied to them, has nearly reached completion. Out of the 334 residing houses in the Fort, 237 are now worked on the dry-earth system. A few houses outside the Fort, (38 in number) at Havelock place, China Garden, and Kaluwella are also worked on the same system. The Council is working these latrines at a loss, charging the householders a small sum, the highest being Rs. 2·25 a month for two buckets and the lowest 37 cents, according to the rental of the house. Most of the latrines in public offices, as well as the Municipal public latrines, 23 in all, are worked by the coolies who work the private latrines and under the same management. This department of the Council's work, called the Health Department, cost during the year the large sum of Rs. 9,285·31. The fees recovered during the year amounted to Rs. 3,935·99. No change has been made in the removal and disposal of the night soil from these latrines. The soil is removed to a depôt at Bataduwa, outside the Municipality, and there buried in trenches cut for the purpose.

During the year 13 lots of land were acquired in the Fort to carry out the scheme at a cost of Rs. 5,670·45, making a total of 61 lots and Rs. 20,368·61 spent in acquiring them.

The conservancy of all latrines is now entrusted to a staff consisting of a manager, 2 overseers, and 28 coolies. These form a distinct department called the Health Department. The manager has direct control of the working of the department, and is personally responsible to the Chairman for its efficient working. Four carts are used for the removal of night soil to the Bataduwa Depôt. Coir and saw dust are supplied to householders free of cost.

Two iron latrines (Horbury's patent) were erected for public use, one at China Garden and the other at Walawwegodella. The railway station latrine was repaired and put in order.

Permission was obtained from Government to make use of the balance remaining from the loan for sanitary improvements for building a sewer in Leyn Baan street to cost Rs. 1,500, and for acquiring a house and grounds in Church street with the object of filling up the low ground and widening the street.

Water Supply.—The reservoir at Bikke, 1¾ mile from the Fort, supplies the Fort of Galle only, where pure water is most needed, and where the local supply is contaminated and unsuitable for domestic purposes. The better class of the Fort residents obtain their supply of drinking water from the wells at Labuduwa and Talbot town, and steps were taken to secure the purity of the supply. The rainfall at Bikke during the year was 124·51 inches, which was far above the average of previous years. In 1877 only was this exceeded, when the rainfall was 139·51 inches. On the 15th November and 6th December the reservoir overflowed. In April the water was at its lowest level, being 4 feet 8 inches below the spill. This is satisfactory considering the larger consumption of water caused by private water service to houses, 47 of which are so provided.

For the larger proportion of inhabitants outside the Fort no provision has yet been made in the matter of supplying good drinking water. Various schemes were from time to time proposed to supply this want. One was to obtain water from the Akmimana hills, where the stream called the Mahadolla has its source. The supply is abundant and the water pure, but the levels taken showed that the head was not sufficient to bring the water by gravitation in the town.

Drainage.—In the Fort the sewers were repaired and cleared and drains in Rampart street improved. A new drain was built in Middle street, and the Pedlar street and Church street drains were renewed.

In the suburbs a new cemented drain was built at the junction of the Colombo and Kumbalwella roads, and a drain round Green market, one at the back of the bazaar mosque, and drains in Fowl street and Ward street bazaar were renewed.

PLAGUE PRECAUTIONS.

A plague patient was landed in September from the ss. Polynesien and was discharged after ten days' detention in the southern plague camp. Thirty-one contacts were at the same time segregated at Bathfield House for ten days.

The plague hospitals at Dadalla were put in order and a storeroom added.

MISCELLANEOUS.

His Majesty's Coronation.—The following address was sent to His Majesty:—

We, the Chairman and Members of the Municipal Council of Galle, humbly beg Your Majesty to graciously accept the loyal congratulations of the residents of this town on the occasion of Your Majesty's Coronation.

We pray that God may long spare the lives of Your Majesty and of our gracious Queen Alexandra.

We remain,
Your Majesty's loyal and humble subjects.

A reply was received from the Colonial Secretary intimating that the address from the Municipality of Galle to His Majesty the King on the occasion of His Majesty's Coronation was laid before His Majesty, and conveying His Majesty's appreciation and pleasure at the tokens of loyalty and goodwill expressed by all classes and creeds of the community.

By-laws on Dogs.—Ordinance No. 25 of 1901, relating to the registration of dogs, was brought into operation within the Municipality from the 1st June, 1902, and by-laws were framed by the Council and received the sanction of the Governor in Executive Council. These by-laws are embodied in the revised Municipal by-laws which lately received legislative sanction.

Destruction of Dogs.—Stray dogs seized by the police were heretofore shot. The Council has adopted the less painful method of drowning. A cart and cage has been provided. The dogs are confined in the cage standing on wheels, and this is quickly run into deep water and kept there until the dogs are dead.

New Market.—Land was acquired at Kaluwella at the junction of the Colombo and Kumbalwella roads for a general market. The cost of acquisition was Rs. 5,866·39. Four markets were built on the site for sale of vegetable, beef, mutton, and fish. The cost of building was Rs. 3,313·42.

Farewell to G. M. Fowler, Esq., Chairman.—The following resolution was passed:—

That this Council regrets the severance of the Chairman's connection with this Council, and wishes him a pleasant time in Colombo. They congratulate him on his deserved promotion and to a seat in the Legislative Council, and wish him a successful administration of the Province, and they desire this to be placed on record.

Elections.—The election of Councillors for the three years commencing 1st January, 1903, was held at the Municipal Office on the 1st December, and the following were elected:—

Ward No. 1	Dr. E. Ludovici.
Ward No. 2	Mr. D. G. Goonewardene.
Ward No. 3	Mr. F. Perera Abeywardene.
Ward No. 4	Mr. N. Dias Abeyesinhe.
Ward No. 5	Mr. Frederick Abeyesundere.

His Excellency the Governor nominated the following gentlemen, under section 10 of Ordinance No. 7 of 1887, to be members of the Municipal Council for the three years commencing 1st January, 1903:—

Dr. W. E. Rudd.	Mr. C. P. Hayley.
Mr. F. J. Pigott.	Mr. Magdon Ismail.

Dr. P. D. Anthonisz, who represented Ward No. 4 from 1894 to 1902, and was an Official Member of the Council from 1867 (date of the establishment of a Municipality at Galle) to 1876, retired, declining to be re-elected. At a meeting of Council held on the 10th January, 1903, the following resolution, moved by the Chairman and seconded by Mr. C. P. Hayley, was unanimously adopted:—

"That the Council place on record its appreciation of the valuable services rendered by Dr. Anthonisz for a number of years as a member of this Council, and its regret at the severance of his connection with it."

H. W. BRODHURST,
Chairman.

Galle, June 22, 1903.

APPENDIX.

No. 1—General Account.

A.—Comparative Statement of Revenue for 1901 and 1902.

	1901. Rs. c.	1902. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Balance of previous year ...	16,858 43½	7,766 20	—	9,092 25½
Taxes.				
Lighting rate ...	4,504 13	4,413 37	—	90 76
Vehicle and animal tax ...	2,364 25	2,909 0	544 75	—
Road tax, including fines ...	11,093 0	11,629 50	536 50	—
Dog tax	338 58	228 40	—	110 18
	18,299 96	19,180 27	1,081 25	200 94
Tolls.				
Paraduawatte toll ...	8,186 35	8,706 98	520 63	—
Morowak korale road toll ...	2,800 0	2,915 0	115 0	—
Gintota toll ...	5,504 99	3,251 25	—	2,253 74
	16,491 34	14,873 23	635 63	2,253 74

	1901. Rs. c.	1902. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Stamp Duties and Fees.				
Carriages for hire ...	304 0	902 50	598 50	—
Hackeries for hire ...	1,349 0	367 65	—	981 35
Boats	188 10	216 60	28 50	—
Carts and coaches ...	1,915 20	770 93	—	1,144 27
Butchers ...	47 50	57 0	9 50	—
Firearms	22 57	26 13	3 56	—
Sale of intoxicating liquor	2,275 25	2,401 60	126 35	—
Opium	—	8,360 0	8,360 0	—
Supreme Court proctors certificates ...	85 80	85 50	—	—
District Court proctors certificates ...	555 75	555 75	—	—
Notaries' certificates ...	95 0	95 0	—	—
Warrants to proctors ...	47 50	—	—	47 50
Jinrickshas ...	57 0	38 0	—	19 0
Petroleum ...	223 0	222 0	—	1 0
Auctioneers and brokers ...	200 0	200 0	—	—
Taverns	6,175 0	5,700 0	—	475 0
Special license to slaughter cattle ...	6 65	3 56	—	3 9
	13,547 2	20,002 22	9,126 41	2,671 21
Market Licenses.				
Fish market and fish auction shed ...	5,005 80	6,300 0	1,294 20	—
Meat market ...	351 25	407 50	56 25	—
Refuse meat market ...	120 0	140 0	20 0	—
Green market ...	1,932 75	1,943 0	10 25	—
Fort market ...	386 18	449 92	63 74	—
Private markets ...	314 50	238 50	—	76 0
Betel shed fees ...	238 35	234 71	—	3 64
Dewatta market ...	93 25	93 0	—	0 25
Fruit market ...	1,364 52	1,839 42	474 90	—
Kaluwella markets ...	—	143 50	143 50	—
	9,806 60	11,789 55	2,062 84	79 89
Slaughter House Licenses.				
Slaughter-house fees ...	427 50	490 0	62 50	—
Pounding and feeding cattle	838 39	815 81	—	22 58
Special license to slaughter cattle	18 75	17 75	—	1 0
	1,284 64	1,323 56	62 50	23 58
Miscellaneous Licenses.				
Grazing cattle ...	294 25	279 50	—	14 75
Offensive and dangerous trades	94 0	93 0	—	1 0
	388 25	372 50	—	15 75
Fines.				
Judicial fines ...	1,510 83	2,427 55	916 72	—
Fines on contractors ...	48 50	47 0	—	1 50
	1,559 33	2,474 55	916 72	1 50
Rents.				
Bathing wells ...	150 0	225 0	75 0	—
Pavilion	84 0	84 0	—	—
Ticket of occupancy ...	1 0	1 0	—	—
Breadfruit trees ...	—	27 0	27 0	—
Boutiques at bazaar ...	72 0	72 0	—	—
	307 0	409 0	102 0	—
Miscellaneous.				
Sale of disinfectants ...	20 28	16 24	—	4 4
Sale of carriage fare tables	51 50	61 0	9 50	—
Interest	614 52	688 40	73 88	—
Sale of chimneys and wicks	—	0 60	0 60	—
Sundry receipts ...	873 15	308 19	—	564 96
Fees for working public latrines ...	1,348 0	1,378 0	30 0	—
Fees for working private latrines ...	2,023 19	2,557 99	534 80	—
Tennis court fees ...	73 75	68 0	—	5 75
Sale of building lots, Havelock place ...	135 0	—	—	135 0
Sale of house rubbish ...	—	15 0	15 0	—
	5,139 39	5,093 42	663 78	709 75
Cemetery.				
Burial fees ...	299 0	257 0	—	42 0
Total ...	83,980 96½	83,541 50½	—	—
Total exclusive of previous year's balance ...	67,122 53	75,775 30½	10,374 60	1,721 83
		Less Decrease ...	1,721 83	
		Net Increase ...	8,652 77	

No. 1.—General Account.

B.—Comparative Statement of Expenditure for 1901 and 1902.

	1901. Rs. c.	1902. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Establishment ...	4,914 88	4,936 88	22 0	—
Pensions ...	1,544 99	1,584 99	40 0	—
General Office Expenses.				
Stationery, cheque books, printing, advertisements, audit of accounts, furniture, petty expenses ...	1,174 46	1,117 92	—	56 54
Revenue Services.				
Commission to road tax collectors ...	955 3	1,111 20	156 17	—
Commission to vehicle and animal tax collectors ...	32 92	38 72	5 80	—
Arresting road tax defaulters	164 0	110 0	—	54 0
Tom-tom beater ...	33 66	29 37	—	4 29
Tin plates for carts and carriages ...	130 66	218 58	87 92	—
Commission to collector of fees for private latrines...	100 0	124 90	24 90	—
Commission to dog tax collectors ...	8 54	6 80	—	1 74
	1,424 81	1,639 57	274 79	60 3
Lighting.				
Lighting within Police limits	4,772 39	4,066 9	—	706 30
Commission to lighting rate collectors ...	200 68	244 37	43 69	—
New lamps, lamp-posts, burners, &c. ...	215 0	583 32	368 32	—
Repairs	3 87	9 97	6 10	—
	5,191 94	4,903 75	418 11	706 30
Sanitary Charges.				
Salaries	4,140 0	4,140 0	—	—
Scavenging and sweeping Fort	2,586 26	2,972 30	386 4	—
Scavenging and sweeping suburbs ...	3,780 0	3,870 0	90 0	—
Scavenging and sweeping Wards Nos. 3, 4, and 5 ...	513 16	516 0	2 84	—
Watering streets ...	79 4	79 22	0 18	—
Sanitary contingencies and plague precautions ...	939 23	364 34	—	574 89
Rent of house of observation, &c. ...	—	480 0	480 0	—
	12,037 69	12,421 86	959 6	574 89
Health Department.				
Salaries	—	1,200 0	1,200 0	—
Conservancy of public latrines... ...	3,255 56	3,065 7	—	190 49
Conservancy of private latrines... ...	2,867 69	3,156 36	288 67	—
Buckets	371 0	269 42	—	101 58
Disinfectants ...	296 72	410 34	113 62	—
Bataduwa Depôt watcher and cooly ...	240 0	295 0	55 0	—
Digging trenches ...	221 70	298 17	76 47	—
Aluminium carts ...	—	590 95	590 95	—
	7,252 67	9,285 31	2,324 71	292 7
Market Charges.				
Salary of market master ...	250 0	250 0	—	—
Rent of Fort market ...	240 0	240 0	—	—
Whitewashing markets ...	180 0	180 0	—	—
Market coolies ...	168 63	271 0	102 37	—
	838 63	941 0	102 37	—

	1901. Rs. c.	1902. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Slaughter House Charges.				
Salary of slaughter-house keeper	360 0 ...	420 0 ...	60 0 ...	—
Grass for cattle in the pound	425 94 ...	426 84 ...	0 90 ...	—
	785 94	846 84	60 90	—
Miscellaneous.				
Band	960 0 ...	880 0 ...	— ...	80 0
Fire brigade ...	354 64 ...	331 11 ...	— ...	23 53
Inspectors' uniforms ...	79 3 ...	60 0 ...	— ...	19 3
Proctors' fees and stamps...	275 25 ...	363 0 ...	87 75 ...	—
Upkeep of clock tower ...	194 51 ...	57 16 ...	— ...	137 35
Destroying stray dogs ...	352 30 ...	297 67 ...	— ...	54 63
Time gun	243 50 ...	246 25 ...	2 75 ...	—
Assessment tax on Municipal buildings ...	592 25 ...	592 25 ...	— ...	—
Water-rate on Municipal buildings ...	74 75 ...	74 75 ...	— ...	—
New carts and repair of old	1,015 0 ...	780 14 ...	— ...	234 86
Tools	47 74 ...	88 55 ...	40 81 ...	—
Horse allowances ...	1,820 0 ...	1,820 0 ...	— ...	—
Contingencies ...	681 55 ...	442 80 ...	— ...	238 75
Acquisition of land ...	4,686 50 ...	1,459 14 ...	— ...	3,227 36
Interest on loan ...	1,786 19 ...	1,230 0 ...	— ...	556 19
Refund	— ...	316 29 ...	316 29 ...	—
Coronation address ...	— ...	88 60 ...	88 60 ...	—
Coronation celebration ...	— ...	500 0 ...	500 0 ...	—
	13,163 21	9,627 71	1,036 20	4,571 70
Public Works.				
Salaries	2,630 0 ...	2,630 0 ...	— ...	—
Upkeep of roads ...	10,712 6 ...	9,985 79 ...	— ...	726 27
Upkeep of bridges ...	1,758 96 ...	527 74 ...	— ...	1,231 22
Upkeep of Municipal buildings	582 89 ...	926 26 ...	343 37 ...	—
Improvement of Municipal buildings ...	— ...	1,535 0 ...	1,535 0 ...	—
Clearing canals ...	1,184 80 ...	1,208 32 ...	23 52 ...	—
Improving drainage and sanitation, Fort ...	867 93 ...	1,510 84 ...	642 91 ...	—
Improving drainage and sanitation, suburbs ...	1,058 76 ...	684 12 ...	— ...	374 64
Minor works and improvements	854 76 ...	374 55 ...	— ...	480 21
Clearing rampart walls ...	176 91 ...	168 47 ...	— ...	8 44
Windmill	161 76 ...	185 64 ...	23 88 ...	—
Victoria park ...	795 45 ...	887 47 ...	92 2 ...	—
Additional latrines ...	500 0 ...	877 70 ...	377 70 ...	—
New roads and improvement of old ...	816 17 ...	580 54 ...	— ...	235 63
Re-building Hirimbura road bridge	1,000 18 ...	— ...	— ...	1,000 18
Planting shade trees ...	163 46 ...	436 65 ...	273 19 ...	—
Building a slaughter-house	1,788 0 ...	— ...	— ...	1,788 0
Renewing fish auction shed	830 0 ...	— ...	— ...	830 0
Building a market at Kaluwella	578 42 ...	2,994 10 ...	2,415 68 ...	—
Erection hurdles at esplanade... ...	496 14 ...	— ...	— ...	496 14
New cattle shed ...	— ...	1,247 75 ...	1,247 75 ...	—
Carriage stand at bazaar ...	— ...	284 97 ...	284 97 ...	—
Carriage stand at railway station	— ...	99 95 ...	99 95 ...	—
Granite seats at Victoria park	— ...	100 0 ...	100 0 ...	—
Sea-bathing place, Fort ...	— ...	664 47 ...	664 47 ...	—
Embankment of elas ...	— ...	386 58 ...	386 58 ...	—
Dog cart and cage ...	— ...	126 0 ...	126 0 ...	—
Renewing Miliduwa bridge	— ...	1,597 65 ...	1,597 65 ...	—
	26,956 65	30,020 56	10,234 64	7,170 73
Cemeteries.				
Salary of cemetery keepers	780 0 ...	803 68 ...	23 68 ...	—
Upkeep of cemetery ...	148 89 ...	65 99 ...	— ...	82 90
	928 89	869 67	23 68	82 90
Total ...	76,214 76	78,196 6	5,920 75	3,939 45
Less Decrease ...	—	—	3,939 45	—
		Net Increase ...	1,981 30	

Assessment Account.

C.—Comparative Statement of Revenue for 1901 and 1902.

	1901. Rs. c.	1902. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Balance of previous year ...	2,635 72	3,546 87	911 15	—
Assessment tax—arrears ...	1,940 3	2,003 88	63 85	—
Assessment tax—four quarters ...	9,320 51	9,029 78	—	290 73
Assessment tax on Municipal buildings	592 25	592 25	—	—
	14,488 51	15,172 78	975 0	290 73
		Less Decrease ...	290 73	
		Net Increase ...	684 27	

Comparative Statement of Expenditure for 1901 and 1902.

	1901. Rs. c.	1902. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Police bill for second half of previous year	4,345 45	4,275 31	—	70 14
Police bill for first half of current year	4,408 26	4,406 76	—	1 50
Pay of four rural constables ...	959 99	936 77	—	23 22
Assessment clerk ...	560 0	560 0	—	—
Stationery and printing ...	136 49	141 1	4 52	—
Commission to collectors ...	501 81	611 8	109 27	—
House numbers	29 64	258 2	228 38	—
	10,941 64	11,188 95	342 17	94 86
		Less Decrease ...	94 86	
		Net Increase ...	247 31	

Waterworks Account.

D.—Comparative Statement of Revenue for 1901 and 1902.

	1901. Rs. c.	1902. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Balance of previous year ...	2,148 44½	—	—	2,148 44½
Water-rate—arrears ...	493 88	643 27	149 13	—
Water-rate—four quarters ...	2,597 59	2,467 24	—	130 35
Water-rate on Government buildings	1,051 20	1,051 20	—	—
Water-rate on Municipal buildings	74 75	74 75	—	—
Fees from Trinity House ...	—	15 0	15 0	—
	6,365 86½	4,251 46	164 13	2,278 79½
		Less Increase ...	164 13	
		Net Decrease ...	2,114 66½	

Comparative Statement of Expenditure for 1901 and 1902.

	1901. Rs. c.	1902. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Balance due, Treasurer ...	—	487 1½	487 1½	—
Pay of overseer, watcher, and coolies	584 37	574 1	—	10 36
Clearing jungle	434 25	297 27	—	136 98
Repairs and incidental expenses ...	413 61	371 70	—	41 91
Interest on loan ...	5,250 0	1,750 0	—	3,500 0
Commission to collector ...	170 65	157 46	—	13 19
	6,852 88	3,637 45½	—	3,702 44
		Less Increase ...	487 1½	
		Net Decrease ...	3,215 42½	

E.—Loan Account brought up to December 31, 1902.

	Rs. c.
First instalment of loan	10,000 0
Second instalment of loan	6,000 0
Third instalment of loan	5,000 0
Fourth instalment of loan	20,000 0
Refund compensation	235 0
Sale of materials	461 10
	41,696 10

	Rs. c.
Building Pettigalla-ela ...	3,058 1
Building retaining wall to Keppu-ela ...	2,705 70
Constructing a road on banks of Keppu-ela...	2,994 35
Building side drains to China Garden road ...	1,220 71
Rebuilding drain on southern boundary of China Garden	703 40
Cost of land acquired in Fort ...	20,368 61
Opening new roads and alleys in Fort ...	1,251 77
Legal expenses	258 67
	32,561 22
Balance ...	9,134 88
	41,696 10

F.—Comparative Statement of Revenue and Expenditure, 1893-1902.

Year.	Revenue.						Expenditure.		
	General Account, exclusive of previous Year's Balance.	Assessment Account, exclusive of previous Year's Balance.	Water-works Account, exclusive of previous Year's Balance.	General Account, including previous Year's Balance.	Assessment Account, including previous Year's Balance.	Water-works Account, including previous Year's Balance.	General Account.	Assessment Account.	Water-works Account.
	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
1893 ...	59,667 89	10,753 14	—	66,183 35	13,094 51	—	54,431 7	12,146 86	—
1894 ...	66,371 31	11,100 65	—	78,123 59	12,048 30	—	62,803 74	10,613 94	—
1895 ...	60,691 58	10,214 38	—	76,011 43	11,648 74	—	64,560 78	11,011 37	—
1896 ...	56,686 19	12,038 79	1,285 0	68,136 84	12,676 16	1,334 12	58,608 31	8,204 12	1,240 85
1897 ...	58,448 2	11,666 95	1,899 17	67,976 55	16,138 99	1,948 29	66,762 62	11,542 80	1,016 27
1898 ...	63,681 31	11,383 54	5,732 31	64,895 24	15,979 73	6,664 33	62,825 88	15,602 68	4,716 16
1899 ...	66,916 56	11,339 10	5,606 79	68,968 92	11,716 15	7,554 96	64,160 76	10,730 20	5,032 29
1900 ...	78,238 18	12,467 27	4,543 74	83,046 28	13,453 22	7,066 41	66,187 85	10,818 10	4,917 97
1901 ...	67,122 53	11,852 79	4,217 42	83,980 96	14,488 51	6,365 86	76,214 76	10,941 64	6,852 88
1892 ...	75,775 30	11,625 91	4,251 46	83,541 50	15,172 78	4,251 46	78,196 6	11,188 95	3,637 45

G.—Progress Report of Works done brought up to December 31, 1902.

Heads of Expenditure.	Amount of Vote.	Expenditure in December, 1902.	Expenditure up to December 31, 1902.	Balance.
	Rs. c.	Rs. c.	Rs. c.	Rs. c.
Upkeep of roads	10,000 0	423 69	9,985 79*a*	14 21
Upkeep of bridges	859 0	25 0	527 74*b*	331 26
Upkeep of Municipal buildings ...	600 0	557 19	926 26*c*	—
Clearing canals	1,428 0	452 24	1,208 32	219 68
Improving drainage and sanitation, Fort	1,459 0	383 72	1,510 84*d*	—
Improving drainage and sanitation, suburbs	1,000 0	165 0	684 12*e*	315 88
Minor works and improvements ...	366 52	64 46	374 55*f*	—
Victoria park	890 0	55 0	887 47	2 53
Whitewashing markets ...	180 0	45 0	180 0	—
New carts and repair of old ...	788 14	—	780 14*g*	8 0
Acquisition of land	1,400 0	141 75	1,459 14*h*	—
Planting shade trees	450 0	24 0	436 65*i*	13 35
New roads and improvement of old ...	800 0	245 31	580 54*j*	219 46
Market at Kaluwella... ...	3,154 50	—	2,994 10*k*	160 40
Sanitary improvement chargeable to loan	15,521 80	30 0	6,386 92*l*	9,134 88
Steps to sea-bathing place, Fort ...	911 40	—	664 47*m*	246 93
New cattle shed	1,250 0	130 0	1,247 75*n*	2 25
Improving Municipal buildings ...	1,550 0	323 75	1,535 0*o*	15 0
Further embankment of elas ...	1,000 0	386 58	386 58*p*	613 42

(*a*) Metalled 183 lines of road, used 504 cubes of metal; gravelled 36 lines of road; patch ruts 293 squares and 1 line, used 109 cubes of metal; cleared jungle on sides of road 444⅘ lines; trimmed and lowered sides 2,033½ lines; cleared side drains 1,118 lines; spread and rolled gravel 70 squares and 12½ lines; patched wheel track 8 lines; removed 9 landslips, used 37 cubes gravel; lopped branches of trees 76 lines; trimmed and formed road 6 lines.

(*b*) Building a culvert on Wakwella road; repair of Miliduwa bridge; purchased 55 bridge planks and 10 na beams; cost of bolts.

(*c*) Repairs to office, Fort market; repair of railway station latrine; thatching refuse meat market; repair of betel shed near Old gate; repair of betel shed near District Court; cost of tats to fish auction shed; cost of colour-washing Pavilion; cost of paint; repair of railing opposite Pavilion.

(*d*) Clearing sewers; building new manholes to sewers; repair of drains in Leyn Baan and Pedlar streets; building a drain at Leyn Baan street junction; repair of side drains, Rampart street; building a drain in Middle street and Church street.

(*e*) Repair of drains round Green market; repair of drains, Fowl street; repair of drain, Ward street; building side drains, Colombo and Kumbalwella road and by Bazaar mosque; and clearing drains, esplanade.

(*f*) Galvanized roof to workshop; planks and tar for garden seats; repair of fire engine; repair of footbridge; making a tennis court in Victoria park; value of rubber hose; clearing jungle below ramparts; and cost of paint.

(*g*) Repair of 9 night soil carts, 8 scavenging carts, 3 iron hand carts, 4 water carts, 1 wheelbarrow, and making a water cart, 2 iron hand carts, and 2 scavenging carts.

(*h*) Cost of land for Kaluwella market; compensation for trees removed to form a road at Talapitiya; cost in cases Nos. 6,216, 6,218, 6,219, and 6,588.

(*i*) Planting shade trees and making 63 tree guards.

(*j*) Raising Hume road and cost of gravel; building culverts, Kitulampitiya, Hirimbure, and Circular roads; building a drain in Middle street; and gravelling Talapitiya road.

(*k*) Building markets at Kaluwella; building retaining wall round Kaluwella market; building a verandah, Kaluwella market; and fitting stone slabs for fish market, Kaluwella.

(*l*) Compensation for land acquired for opening roads and alleys in Fort in cases Nos. 5,918 and 5,919; cost of opening roads and alleys in the Fort.

(*m*) Building steps to sea-bathing place for females, Fort, and fixing benches.

(*n*) Cost of building cattle shed inside the cattle pound and fixing iron fence to cattle shed.

(*o*) Repair of fish market roof, cost of cement, and building drain round Kaluwella market.

(*p*) Repairing of retaining wall, Keppu-ela.

H.—Permanent Repair of Roads.

	Length of Road. Miles.	Repaired. Metalled Lines.	Repaired. Gravelled Lines.
Fort streets	2·75	18	14
Old and New gate road	·75	28½	—
Market roads	1	4½	—
Hirimbura road	3·50	63	—
Wakwella road	2	2½	—
Kumbalwella road	1·25	38½	—
Kandewatta road	·50	12½	—
Bope road	2·25	—	—
Circular road	2	2	—
Havelock road	·13	—	—
Cripps road	·75	3¼	9½
China Garden roads	·25	—	—
Morris road	2·25	—	—
Elliott road	1	—	—
Kon tree road	·50	—	—
Hirimbura cross road	1·50	—	—
Dickson road	·75	10	11
Jail road	·50	—	—
Templer road	·25	—	1½
Hume road	·50	—	2
Pettigallewatta roads	·17	—	—
Kitulampitiya road	·75	—	—
Steele road	·50	—	—
Donald Jansz road	·25	—	—
Hall road	·50	—	—
Talapitiya road	·50	—	—
	27·05	183	38

I.—Comparative Return of Collections under the Road Ordinances for 1901 and 1902.

		1901.	1902.
1.	Number of names borne on division officers' returns	8,424	8,553
2.	Number of persons exempted from labour	141	87
3.	Number of names borne on division officers' returns less exemptions—1 less 2	8,283	8,466
4.	i. Paid commutation	7,111	7,467
	ii. Performed labour	3	3
	iii. Fined	17	10
	iv. Imprisoned	—	1
	v. Total of i., ii., iii., and iv., being number of persons who discharged their liability	7,131	7,481
5.	Percentage of 4 (v.) to 3	86·0	88·3
6.	Accounted for as died, paid elsewhere, double entries, erroneous entries, discharged, &c.	655	720
7.	Unaccounted for on last day of year	496	333

J.—Classified Statement of Prosecutions instituted by Municipal Officers in 1902.

	Municipal By-laws, XI., 2; XII., 2; XVIII., 6, 9, 22; XXI., 2; XXX., (a), (c)	Ordinance No. 7 of 1887, Sections 182, 205, 244, 259.	Ordinance No. 15 of 1862, Section 1 (1), (2), (3), (4); (5), (6), (12).	Ordinance No. 16 of 1865, Section 53 (7).	Ordinance No. 9 of 1899, Section 41.	Ordinance No. 8 of 1866, Section 3.	Total.
Inspector Ward No. 1	21	1	5	1	—	—	28
Do. No. 2	2	4	42	—	—	5	53
Do. No. 3	—	2	—	2	3	—	7
Do. No. 4	—	—	—	—	1	—	1
Do. No. 5	—	—	—	—	4	1	5
Market Master	13	6	—	—	—	—	19

Quarterly Reports of Mr. C. E. de Silva, M.B., M.R.C.S., Sanitary Officer.

For the Quarter ended 31st March, 1902.

The General Health was good. Chickenpox was prevailing in all the wards during the quarter. The plumbago sheds, where large numbers of poor women work, were the chief sources of dissemination. According to the regulations under Ordinance No. 3 of 1897 only cases of plague, cholera, and small-pox can be removed to hospital, but we have no power to remove cases of chickenpox without the consent of the patients. No patients having a home would consent to go to the hospital, and isolation at home is useless unless an intelligent guard could be kept at every house to prevent communication, &c. Unless the authority to remove patients to hospital when necessary is extended to every infectious, contagious, or epidemic disease, our power for the prevention of epidemics and doing good will be greatly crippled, and epidemics of measles, chickenpox, whooping cough, enteric fever, dysentery, &c., will spread and run their course. Except homeless beggars no one would consent to go to the hospital.

In the Fort the dry-earth system is being satisfactorily worked in about 210 houses. The new roads and lanes are a great improvement to light, ventilation, drainage, and scavenging. Cemented side drains should be built along these new roads and lanes to facilitate house drainage.

In other wards also, within the police limits at least, more roads and cross roads should be opened up to facilitate scavenging and drainage, which are very defective. Outside the Fort the scavenging cart goes along the road and takes up refuse left by the roadside and road sweepings, while large accumulations are left in the gardens within ; such heaps of refuse pollute the air, the soil, and water in the neighbouring wells.

Outside the Fort there is no house drainage at all. Refuse water is thrown about the compounds and pollutes the air, the soil, and water in the wells. Where the ground is low and porous, as in most places, rain water percolates into the soil, causing dampness of houses and hastening putrefactions of organic matter. Scavenging and sweeping not satisfactory outside the Fort.

Municipal Latrines were kept clean.

For the Quarter ended 30th June, 1902.

The General Health.—About 20 cases of chickenpox were reported during the quarter.

In the Fort the dry-earth system is being worked satisfactorily in about 217 houses. It should be extended to all the houses in the Fort, and the cesspits entirely done away with.

Cattle and horse dung should also be removed daily and not kept for days within the premises. In most places dung is not removed for a week or two. Particularly in galas and dairies the daily removal of dung should be enforced.

There is extensive surface pollution by human excrement outside the Fort owing to the absence of privies. The seashore, waste lands, private gardens, and drains are used as latrines. When it rains infected excrement is washed away with the surface water which gains entrance into unprotected wells and contaminates the water. Cases of typhoid fever, dysentery, &c., occur as a consequence. Fruit picked up from such filthy localities conveys infection.

Scavenging and Sweeping.—Not satisfactory outside the Fort. In crowded localities, such as Kaluwella, Pettigala, Dangedara, Magalla, &c., the refuse from houses along the road only is scavenged. From those situated at some distance from the road refuse is not removed and is thrown about the gardens. In such places dust boxes should be provided at convenient places for the deposition of house refuse, and refuse so deposited should be removed by the scavenging cart daily.

Municipal Latrines were kept clean. The ground about the China Garden latrines by Wakwella road is swampy and looks very unsightly. This requires filling up.

Markets.—The flushing of the fish market is not satisfactory. Putting a few buckets of water and sweeping out does not remove the smell nor clean the floor properly. There should be a cistern with pump and hose to thoroughly flush and clean the floor and drains. The fish market requires flushing twice a day, and this could be easily done with the cistern arrangement ; a well may be dug between the fish market and meat market, and both may be flushed with one cistern. This can be used for flushing the other drains about the bazaar as well.

For the Quarter ended 30th September, 1902.

The General Health was good. Only two cases of chickenpox, one in the Pettah police barracks and the other in the Fort, were reported during the quarter. The constable was removed to the Infectious Disease Hospital, and the Fort patient, Anderson, was isolated in the house. Seven cases of measles were reported from Maitipe.

The houses between Templer road and Colombo road are closely packed and situated at different levels. The drainage from the premises above is to that below, and the privies of the premises above draining to the wells below. The cesspits are very badly constructed, and the majority are unfit for use. It is advisable to fill up cesspits and introduce the dry-earth system to the locality. House drainage is altogether neglected, except in a few places, and refuse water is thrown about the compounds. In the locality pigs are kept without proper shelters. They foul the soil a great deal. Where pigs are kept a proper sty should be provided with paved floor and drainage.

The swamps at Minuwangoda and the excavations on either side of the Colombo railway line require filling up, so as to prevent stagnation of water.

Scavenging and Sweeping.—Not satisfactory outside the Fort.

Municipal Latrines were kept clean.

Markets were kept clean, but the flushing of the meat market was not regularly attended to.

For the Quarter ended 31st December, 1902.

The General Health was very good. Only three cases of chickenpox were reported during the quarter. A case of typhoid fever was reported from Templer road. The infection is believed to have been conveyed by the dhoby in whose house a case had occurred. In this country the dhoby is a source of great danger to the public health, as infected clothing is washed without previous disinfection in places where other dhobies wash, and infection may be carried by all the dhobies who wash at such places to different houses. The stagnation of water in some places they wash increases the danger.

The sanitary condition of the Fort is greatly improved after the introduction of the dry-earth system. There are some cesspits left yet, and it is advisable to fill them up and introduce the dry-earth system to all the houses as soon as possible, as every cesspit is a source of danger to the neighbouring residents who may have the dry-earth system in their own houses. Cemented side drains should be built along the new roads and lanes to facilitate house drainage.

A good water supply is badly needed in China Garden, Kaluwella, Pettigala, Magalla, &c. (Wards Nos. 2 and 3). Water is supplied to these localities by carts and different wells. All wells the water of which is used for drinking should be boarded to prevent the entrance of foreign matter, and pumps should be used instead of pots and ropes, which are handled by so many different individuals, and which increase the danger of contamination of the water. Men and carts supplying water should be registered. Any cases of infectious disease occurring in the house of a man supplying water should be immediately notified. The water barrel should be regularly cleansed. The cart and barrel should be presented for inspection once a month.

Scavenging and Sweeping not satisfactory outside the Fort.

Drains.—The flushing of built drains is not at all satisfactory. Most of the drains are simply swept out. Every built drain should be well flushed daily. Pettigala drains have no proper fall, and water stagnates at different places.

Municipal Latrines were kept clean.

CHARLES E. DE SILVA, M.B., M.R.C.S., &c.,
Sanitary Officer.

RESOLUTION OF COUNCIL.

The foregoing Report having been submitted to the Council at a Meeting held on June 20, 1903, the following resolution was passed :—

"Resolved,—That the Report be adopted."

The Municipal Office,
Galle, June 22, 1903.

J. E. ANTHONISZ,
Secretary.

XXXII.—1903.

REPORT AND ESTIMATE

OF THE COST OF A

WATER SUPPLY TO MANNAR TOWN.

Ordered by the Legislative Council to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 5 cents.

1903.

WATER SUPPLY TO MANNAR.

No. 1.

The ASSISTANT GOVERNMENT AGENT, Mannar, to the GOVERNMENT AGENT, Jaffna.

No. 30. Mannar Kachcheri, December 9, 1902.

Reservoirs in Mannar Fort.

SIR,—I HAVE the honour to inform you that I inspected this morning the reservoirs in the Fort with the Provincial Engineer.

The guttering for which I applied in my letter No. 23 of 17th October last is now being put in position, and by this means I hope to get one of the cisterns filled.

There are no roofs projecting over and in a line with the other reservoir, and it consequently receives a very limited supply of water.

The Provincial Engineer has, however, suggested to me a way by which water could be brought from the eaves of the roofs of the police quarters.

They afford a considerable catchment area, and sufficient, I think, to fill this reservoir.

It will be necessary, however, to take the levels before making any further proposals.

2. I shall be glad if the Public Works Department can be asked to make a report on the drainage from roof area in the Mannar Fort and supply an estimate for bringing the rain water to this reservoir.

Storage in the Fort will be of great service, and will afford assistance in estimating the storage of rain water that will be required for the supply of Mannar.

I am, &c.,
E. B. DENHAM,
Assistant Government Agent.

No. 2.

The PROVINCIAL ENGINEER, Northern Province, to the DIRECTOR OF PUBLIC WORKS.

No. 172. Jaffna, February 27, 1903.

Water Supply, Mannar Town.

SIR,—I HAVE the honour, in compliance with your letter No. 2 of 6th ultimo, to submit estimate and report as follows :—

The roofs on which water can be collected and conveyed, partly by the ordinary gutters and partly by an old cement drain originally constructed for that purpose, cover an area of 3,352 square feet. The average rainfall for the last five years at Mannar has been 38 inches ; allow for loss owing to evaporation, wastage, absorption, and other causes, say, 18 inches, a balance of, say, 20 inches may be considered available, which, falling on the area above referred to of 3,352 square feet, will give 5,580 cubic feet of water. The cubical contents of the cistern is 4,740 cubic feet.

2. The estimate (Rs. 800) herewith submitted provides for new cement concrete surface drain where required, and for reforming old drains so as to obtain a uniform section (egg-shaped) of drain throughout. Ordinary galvanized guttering is provided where concrete drains are not required. In some places, in order to obtain sufficient head, the guttering has to be raised a few inches, which is done by cutting a small piece off the end of the eaves. A cheap palmirah cover for the cistern is provided for.

3. The masonry in the cistern is very old, and I consider it necessary to cement render it ; unfortunately it has no outlet to facilitate emptying or cleaning out when required.

I am, &c.,
W. POLE FLETCHER,
Acting Provincial Engineer, Northern Province.

Estimate of the Expense necessary to be incurred for supplying Water to the Tank inside the Fort, Mannar.

This estimate provides for the construction of cement concrete surface drains and for the necessary guttering, &c., to convey the rain water collected on certain roofs in the Fort to an existing old cistern ; also for cement rendering this cistern and providing a timber covering for the same.

Balance on vote after charging this estimate is Rs. 49,200.

Quantities.	Items.	Rate.	Amount.	Total.
		Rs. c.	Rs. c.	Rs. c.
Lin. ft. 400	Cement concrete drainage	1 0	400 0	
13	Lengths half-round galvanized guttering, 8 in. by 6 ft. ...	3 50	45 50	
1	Stop end, 8-in.	0 40	0 40	
8	Spikes	0 24	1 92	
15	Large half-round brackets	0 87	13 5	
—	Allow for labour for fixing guttering	—	25 0	
Square 1¼	Removing and again replacing eaves	20 0	25 0	
Sq. ft. 343	Palmirah covering to cistern	0 20	68 60	
Squares 12¼	½-in. cement plastering inside tank	8 0	98 0	
—	Allow for two distribution gates	—	5 0	
				682 47
	Contingencies	—	—	60 3
	Overseerage	—	—	37 50
	Transport fund	—	—	20 0
	Total ...	—	—	800 0

Jaffna, February 27, 1903.

W. POLE FLETCHER,
Acting Provincial Engineer.

Amended Estimate.

Quantities.	Items.	Rate.	Amount.	Total.
		Rs. c.	Rs. c.	Rs. c.
Lin. ft. 615	Cement concrete drainage	0 70	430 50	
Lengths 13	Half-round galvanized guttering	3 50	45 50	
No. 1	Stop end, 8-in.	0 40	0 40	
lb. 8	Spikes	0 24	1 92	
No. 15	Large half-round brackets	0 87	13 5	
—	Allow for labour in fixing guttering	—	25 0	
Square 1¼	Cutting and removing eaves	20 0	25 0	
Sq. ft. 343	Palmirah covering to cistern	—	88 50	
Squares 12¼	Cement plastering, ¾ in., inside tank	8 0	98 0	
No. 4	Distribution gates	3 75	15 0	
				742 87
	Contingencies	—	—	2 63
	Overseerage	—	—	34 50
	Transport fund	—	—	20 0
	Total ...	—	—	800 0

This amendment becomes necessary in order to provide for an extra length of concrete surface drain, which will enable the overflow from one cistern to be conveyed to and stored in the other cistern ; this improvement necessitates a slight increase in the item "Palmirah covering to Cistern."

Jaffna, October 28, 1903.

W. POLE FLETCHER,
Provincial Engineer.

C. A. LOVEGROVE,
for Director of Public Works.

XXXIII.—1903.

REPORT

ON

GOLD PROSPECTING IN CEYLON.

By Mr. G. G. DIXON.

Ordered by His Excellency the Governor to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the Government Record Office, Colombo, price 10 cents.

1903.

GOLD PROSPECTING IN CEYLON

G. G. DIXON, Esq., to the Hon. the COLONIAL SECRETARY, Colombo.

Colombo,
Ceylon, May 19, 1903.

SIR,—I HAVE the honour to report on the gold occurrences in Ceylon. I received instructions from the Colonial Office to leave London on 25th April, 1902, for Ceylon and to report myself at Colombo. On arrival at Colombo on 21st May I was requested to proceed at once to Horton Plains.

2. I left Colombo the following morning, and on arrival at Horton Plains I received my instructions from the Acting Governor. I was directed to make an examination of the Island and report upon the quartz reefs and the alluvial deposits. The object of the examination was to determine whether the reefs, and the alluvial deposits, carried gold in sufficient quantities to pay.

3. I was further instructed first to make a general investigation, as the area was a large one, some 24,000 square miles; the detailed work to be carried out later, should the information collected warrant further expenditure.

4. It had been stated that gold had been found both in quartz and alluvium, and that the ancient inhabitants knew of the existence of gold from the fact that it was mentioned in the *Mahawansa;* certain places the names of which had a reference to gold were also brought forward, as an example, Ruanwella, "golden sand," Rangala, "golden rock," &c.

5. Careful perusal of all the papers and reports obtainable and interviews with persons who knew the country well proved that gold had been obtained in certain localities. Australian miners found gold in the Maha-oya in 1854, but not in sufficient quantities to pay. In the same year gold was discovered in Nuwara Eliya, but did not pay to work. In 1868 gold was obtained from the Katugasella creek, Ratnapura, in the Province of Sabaragamuwa. During the year 1881 numerous samples of gravel, sand, and quartz were sent to Colombo to be assayed, but proved valueless, the shining particles which had attracted notice being scales of mica.

6. In Sir Emerson Tennent's "Ceylon" reference is made to the finding of gold in the Maha-oya and Getaheta, but that it was not in sufficient quantities to pay. In June, 1881, Mr. A. C. Dixon appears to have sunk shafts on quartz reefs in the Dolosbage district; the best result obtained by assay was 4 grains or eightpence per ton of ore. Gold is reported to have been found in a quartz reef at Ramboda, and that samples sent home assayed 2 oz. per ton. In several other localities gold has been reported as being present in the gravel, but no details are given.

7. I do not place much faith in such names as Rangala, &c., as proof that gold existed in these localities; I think the names were given in reference to the colour of certain particles to be found in both rocks and sand. These golden-looking particles are scales of mica.

8. In the case of the Australian miners, in the gold find at Nuwara Eliya and at Ratnapura the gold was not found in sufficient quantities to pay. In the two former cases the work appears to have been carried on by men who were used to the work, nevertheless it did not pay. In the latter case, Ratnapura, the details are not given, but I was fortunate in finding the man Ardera, who carried out the work. Ardera stated that he took out the gold for Mr. F. R. Saunders, and that during part of the operations two other gentlemen were present. The stream (the Katugasella) was worked between the two bridges for a distance of 20 fathoms (120 feet) top measurement. He did not know how much of the bottom gravel this would present. The gravel was drawn to the surface with long-handled mamoties. Below the gravel was a blue clay, which was scraped clean with the mamoties. The gravel was worked by the running stream, and the black sand and gold was washed out in cocoanut shells and tin basins. Some of the grains of gold they picked up with their fingers. The depth of the surface soil was 21 feet, but the banks accounted for 9 feet of this, leaving 12 feet below water level—the gravel was 6 inches thick. The reason they gave up searching for gold was that it did not pay. When gemming they took out any gold that they found in the baskets.

The largest piece he found weighed 6 carats (6 carats at 3·17 grains per carat=19·02 grains), and he sold it for 62 or 65 cents—he forgot which. Washing out gems is much simpler work, and costs less than gold washing. He opened out some twenty pits for gold on his own account, but they did not pay.

9. If he sold 6 carats or 19 grains of gold for 65 cents, he did not get the real value of the gold—

Sixty-five cents	$10\frac{3}{4}d.$
19 grains of gold at 2*d.* per grain	3*s.* 2*d.*

Probably he is mistaken in the weight.

10. The sample taken by Mr. A. C. Dixon at Dolosbage from a quartz reef gives the most reliable information, as it was assayed and the actual value per ton is given.

11. I made inquiries about the sample sent home from Ramboda, which gave a result of 2 oz. per ton, and I gather that some gold quartz, probably from outside the Colony, got accidently mixed with the ore from the reef. At least this is the supposition; for extended operations proved the reef to be barren.

12. I therefore have the following facts to deal with. The natives knew of the existence of gold, but did not work the gravels for it, probably because it did not pay. The Australians and other Europeans worked the gravels, but could not make it pay. Europeans worked the quartz reefs and could not make them pay. In no case, as far as I have been able to discover, has a single rich find of gold been made; in a digger's country this is the first thing necessary to start mining on an extended scale.

13. I first inspected the Malwana district, situated about 30 miles north-east of Colombo. The gravel deposits are situated between the north bank of the Kelani river and the south bank of the Mitotuena river, a tributary of the Kelani. The country here, with the exception of a low rocky ridge, is very flat, and at the time of my visit all the low-lying country was under water, making it quite impossible to test the flats, over which I had to wade knee-deep in water. On the south side of the low ridge, referred to above, the gravel was within 1 foot of the surface. A pit was sunk at this point and showed 1 foot of surface soil, 3 feet of gravel and cabook, and then decomposed rock. Several pits were sunk in this locality, all of which showed a varying depth of gravel from 3 or 4 inches to 4 feet. Local information gives the depth of gravel in one pit as 5 feet; this pit was flooded at the time, and the information could not be verified.

14. Practically the whole of this gravel deposit carries gold. Attempts have been made to work the ground for this metal, but without success. The gold obtained by careful panning gave from 8*d.* to 11½*d.* per cubic yard. This is calculated per cubic yard of gravel: no allowance is made for top soil, which varies considerably.

15. From this district I went on to Avisawella to test the deposits in and on the banks of the rivers Sitawaka and Getaheta. Gold was found in the gem-bearing gravel in the beds of the rivers, and in the gravel deposits on the flats; the gravel averaged 9 inches. In the Getaheta no gold was found beyond half a mile from its junction with the Sitawaka. The tributaries on both banks of this creek were also tested, but no gold was found.

16. On the right bank of the Sitawaka river near the railway line a deposit of gravel was found 20 feet above the river; several pannings produced one fine colour of gold; this gravel is reported to carry gems. The gravel of the creeks in the neighbourhood of Pussella, and also that of the gem pits on the banks, was tested, but without result.

17. From Pussella I visited the Wilderness of the Peak. The country in the vicinity of the numerous rivers was composed of boulders of gneiss and some quartz; although the streams were carefully tested in likely-looking spots, and wherever a deposit of gravel presented itself, no gold was found. The gravel deposits consisted of a streak of gravel from 5 or 6 inches to 3 or 4 feet, but no gravel terraces were discovered.

18. Quartz in the form of recemented deposits rather than that of reefs was abundant in this part of the country, the weathering of these masses producing great quantities of quartz sand and, to a much smaller extent, angular boulders of the same material, which only required exposure and time to be themselves converted into sand.

19. The mountain Kunuderpaiawitta is resting on a bed of decomposed gneiss rock, having the appearance of disintegrated sandstone, composed of quartz in the form of small angular pieces, and pieces 6 inches or 8 inches across imbedded in kaoline and felspar. This material is being squeezed out from below the mountain in the consistency of well-pugged clay. At the time of my visit it was standing out 4 or 5 feet, the outer edge roughly broken off, showing where the last mass had fallen away. The quartz from this formation proved by assay to be barren. This peculiarity in the bedding of the mountains can be seen at several places between Ratnapura and Haldummulla. At the 100th milepost on this road some trouble has been given by the flooding or sliding of this material over the roadway.

20. I could get no information that this strata had ever been worked for gems. It is interesting to note, however, that the gem country is between this formation and the sea.

21. From the Wilderness of the Peak I returned to Ratnapura. As the Kalu-ganga was low I decided to put down a pit in the middle of the stream to get some information of the class of gravel, and also to test it for gold. The pit was sunk to a depth of 10 feet in the gravel. The gold obtained equalled one fine colour to every three or four pans. The bottom gravel was not reached; the river coming down in flood made the continuation of this work impossible.

22. At the same time that this was being carried out pits were being sunk at different points on the Katugasella creek at the back of the Residency. No. 1 pit sunk in the paddy fields behind the town gave no gold. No. 2 pit sunk on the left bank in the narrows gave no gold. No. 3 pit sunk on the flat in the narrows on the right bank gave no gold in the gravel, but six pans from the silt gave five fine colours. Below this point gold was obtained by Mr. F. R. Saunders.

23. As the gold obtained from the three pits was very fine I determined to try the creek higher up. On reaching an elevation of 30 or 40 feet above the paddy fields I found that there was a strip of the creek above the road and below the reservoir which could be worked without much expenditure. This I had carefully washed down—all boulders, gravel, and sand being removed—and out of some 2 tons of gravel I obtained a few fair-sized flakes of gold. The average value of this gravel was fourpence halfpenny per cubic yard.

24. Having found gold in a tributary stream and in smaller quantities in the main river, I decided to test the black sand at the mouth of the Kalu-ganga to see if any fine gold had been carried down to the sea. Numerous tests made in the river and along the coast for 5 miles gave no gold. At the mouths of all the gold-bearing rivers on the west coast of New Zealand fine particles of gold can be obtained from the black sand of the seashore.

25. Exploration was then commenced in the Kandy District. The hills showed no sign of gravel banks or terraces, and the small streams were barren. The stream flowing from Kandy lake gave a colour or two after repeated tests, and the gravel in the pits in the Peradeniya Gardens carried gold from the surface to a depth of 15 feet, this being the deepest point which I could reach without doing a considerable amount of excavating. This gravel gave from one to three fine colours per pan. The gravel had no doubt been deposited by the Mahaweli-ganga in times past.

26. I tested creeks between Peradeniya and Kadugannawa, but without result. Local report states that under the clay, in the deepest clay pits, there is a very heavy red material. At the time of my visit there was too much flood water, so that I was unable to test this report and cannot say what it may have been.

27. From Gampola I visited Sinnapitiya estate, and then passed over the range into the Province of Sabaragamuwa and tested the head waters of the Maha-oya, but without any result. The country at this point was washed fairly clean, and any gold that may have come from this district in past times would be probably found lower down in the deep ground under paddy fields near Rambukkana.

28. From Gampola I went to Matale and followed up the Rattota road. The Rattota stream gave one fine colour of gold to seven pans. I tested all likely-looking places, but without any satisfactory results.

29. On returning from this road I proceeded up the North road to Dambulla. Very little gravel was to be found. At Galewella on the road to Kurunegala I decided to sink a pit. The top soil at this point was 13 feet deep, and gravel mixed with clay 3 feet. As this gravel gave no gold the pit was stopped. There was no sign of gravel terraces.

30. From Kurunegala I tested the country north, south, east, and west, but without any satisfactory results.

31. From Kurunegala I went up the Northern Extension Railway as far as Ambanpola. There was no gravel to be seen. The officials state that they encountered none in their excavations, and that the openings made for their bridge piers showed sandy loam and gneiss rock.

32. From Ambanpola I followed country roads to Puttalam. The country was very flat with low sand ridges running parallel with the sea. A noticeable feature of these sand ridges was, that on their tops the sand was a deep red, which gradually faded to a light yellow sand on the flats. Ridge after ridge presented the same appearance; this was no doubt due to the black magnetic (iron) sand (so abundant all along the coast of Ceylon) remaining *in situ*, whilst the lighter portions of sand were washed by the rain or blown by the wind into the depressions. I tested the black sand along the coast, but without result. On three occasions during my cross-country journey my cart was upset, and in many places the roads had to be repaired to let the cart pass.

33. From Puttalam I followed the Coast road *viâ* Waimatavillu, Ponparippu, Marichchikkaddi, Chilavaturai, and Mantai to Attimoddai. Pannings from the soil taken from a well at Waimatavillu 22 feet deep gave no gold. The whole of this country was composed of sand with here and there outcrops of gneiss rock.

34. From Attimoddai in the north and Mannar on the west to Kunchuttu on the east (12½ miles from Vavuniya) the country was flat, with occasional outcrops of gneiss just showing above the ground. At Kunchuttu the general flat was broken by a low range of hills carrying quartz in abundance. Some of the reefs contained iron and plumbago; limestone also occurred. There was no evidence of gravel banks through all this country as far as Trincomalee.

35. From Trincomalee after half a day's rest I went to Habarana, and from there worked to Batticaloa *viâ* Polonnaruwa, Mannanpitiya, Vakaneri, and Valenekelli. The Mahaweli-ganga at Mannanpitiya shows nothing but mud, silt, and sand. At Vakaneri the rock is very near the surface, but a wide space intervenes between this and the next outcrop.

36. The journey from Polonnaruwa to Batticaloa was a most trying one; the country was all dried up, and the water holes were far apart, some of them 16 miles. To cover 16 miles on foot over a sandy road, a portion of which had to be accomplished during the heat of the day, was most exhausting.

37. During this journey from Polonnaruwa to Batticaloa the line of march was twice interrupted by wild boars. On the first occasion at Mannanpitiya the animal missed his strike and passed into the jungle, but on the second occasion, to the north of Vakaneri, he charged across the line of carriers and struck at a cooly carrying a mattress (the property of an irrigation officer, who had kindly acted as guide to me, to take me to some rocky country I wished to inspect). The animal missed the man's leg with his tushes, but hit his thigh with the top of his head, lifting him completely off his feet and throwing the feather bed on to the man in front, who in turn pitched forward. In the confusion the boar returned to the jungle.

38. More than once during the time spent in this region I had to follow down dry river beds until a place where bears had dug (some 5 feet) into the sand proved the presence of water. These holes on being cleaned out never failed to give water which was sweet, although all round the immediate locality the remaining pools were salt.

39. From Batticaloa I travelled up the Batticaloa-Lunugala road as far as Ekriyankumbura, and from there went north to Hembarawa. At this point I crossed the Mahaweli-ganga, the banks of which are composed of mud, silt, and sand, which carried no gold. I then followed a foot track to Dankanda gap. The gravel found in the streams was laid down at a late date, no old gravel banks or terraces being visible. No gold was obtained. From Dankanda I went on to Matale, which finished this line of exploration.

40. The next line taken was from Matale to Gampola by train, and from there to Hambantota *viâ* Ramboda, Nuwara Eliya, Badulla, Bandarawela, Haputale, Koslanda, and Wellawaya. Whilst carts were being arranged for at Gampola, I again crossed the dividing range to verify samples taken on a former occasion in the Province of Sabaragamuwa. This meant a journey on foot of some 16 or 20 miles with a climb over a ridge of 2,500 feet above sea level, which had to be again crossed on the return journey the same evening.

41. From Gampola to Nuwara Eliya the streams tested all proved barren. At Nuwara Eliya the streams running into the lake carried gold in small quantities. Once over the divide, however, the streams again proved barren, and no gold was found between this point and Hambantota.

42. On my return from Colombo I left Hambantota for Haputale *viâ* Timbulketiya, Madampe, Pelmadulla, and Haldummulla. Soon after leaving the weather turned very wet, and a great deal of swampy country had to be passed through. On several occasions the carts and bulls had to be hauled out of the mud holes by the coolies and cartmen. The streams crossed were tested, but without result. At Timbulketiya the gravel in the gem pits was from 6 inches to 2 feet 9 inches thick, lying directly on the bedrock. A careful test made of 1 ton of this gravel taken from the different gem pits gave no gold. I examined gravel in the gem pits on the We-ganga 25 feet below the surface, but could not get a colour of gold.

43. From Haputale I went by train to Hatton, and from this point I worked through the Laxapana and Maskeliya districts, but without finding any gold or gravel in any quantity. I had hoped to have followed the Kelani-ganga to the point where it cuts its way through the main range, but the bad weather prevented my doing so. I then returned to Colombo, where I was laid up with an attack of enteric fever, which I did not get over until 30th January.

44. On 9th February I left for Galle, and from there visited the Morawak korale, where I marked several places where I wished pits sunk to test the gravel. This work was carried out by the Inspector of Mines, Mr. T. G. Hunter, who was with me through the greater portion of my travels. The tests of the gravel gave a few colours of gold per pan, but it was not present in payable quantities.

45. In giving values per cubic yard reference was made to the gravel worked; to this in actual practice must be added, where the flats are worked, the amount of top soil or over-burden, in some cases amounting to over 20 feet. In the creek beds and in the rivers this top soil would not be met with, and in some of the minor streams it is less than 10 feet.

46. The present general survey of the country has proved that there are practically no gravel terraces, and that the shallow deposits, which are worked by the digger in other countries, would not be sufficiently remunerative or extensive. Had there been any appreciable quantity of gold bearing gravel in the Island, it is only reasonable to suppose that during my journey of 3,041 miles, of which 1,078 miles was done on foot, that I should have found some of it. Hundreds of tests were made as I worked from point to point; in fact, wherever gravel was found it was tested.

47. The above refers to surface work, and the fact must not be lost sight of, that we are as ignorant as ever as to what minerals occur in depth.

48. I am therefore able to report upon the shallow workings, river beds, &c., as being unprofitable to work by the gold digging system.

49. By the dredging system I believe, if suitable places were secured, and the gold saving appliances were modified to suit the conditions necessary for saving both gems and gold, that the undertaking, if properly managed, would pay.

50. From some hundreds of tests made of quartz from reefs all over the country—for it is very abundant—I find that the highest values obtained were not remunerative. The quartz reefs of this country are dissimilar from any I have yet met with; they give one the impression that they are not fissure veins at all, but simply a re-arrangement of the quartz particles of gneiss. I do not think that the gold which has been found in the gravels had its origin in the gneiss, but in either a capping rock which has long since been worn away, or possibly in a fold of Hornblende Schist, such as occurs in the Kolar goldfield, Mysore, India.

51. If my theory is correct, then we must look for gold produced from that capping rock, not in the hills but deeply buried. If an old time river bed could be found on the plains and explored, it would elucidate this point.

52. In places like the lake at Nuwara Eliya, which must have been a swamp at some time; in the low-country where two or more streams meet, and where there is little or no scour as in Malwana; and at the junction of the Sitawaka and Getaheta, the gold would settle and remain for all time.

53. There is no information to be had on the subject of deep leads, as no boring has yet been carried out to prove the existence of gold or other minerals in depth.

I am, &c.,

GEORGE G. DIXON.

XXXIV.—1903.

REPORTS

ON THE

PEARL FISHERY OF 1903.

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 40 cents.

1903.

CONTENTS.

	PAGE
The Government Agent, Northern Province, to the Hon. the Colonial Secretary	1
Report on the Pearl Fishery of 1903	1
The Inspector of Pearl Banks to the Hon. the Colonial Secretary	16
The Principal Civil Medical Officer to the Hon. the Colonial Secretary	18
The Acting Colonial Surgeon, Northern Province, to the Principal Civil Medical Officer	18
The Government Agent, Northern Province, to the Hon. the Colonial Secretary	20
Supplementary Report on the Pearl Fishery of 1903	20
The Government Agent, Northern Province, to the Hon. the Colonial Secretary	23
The Postmaster-General to the Hon. the Colonial Secretary	24

REPORTS ON THE PEARL FISHERY OF 1903.

No. 1.

The GOVERNMENT AGENT, Northern Province, to the Hon. the COLONIAL SECRETARY.

No. 161. Jaffna Kachcheri, May 19, 1903.

SIR,—I HAVE the honour to transmit my report on the recent Pearl Fishery.

2. It is not yet definitely possible to state the actual expenditure, but the receipt figures are correct, and it may be taken that the total receipts (exclusive of receipts and expenditure on postal accounts) are equivalent to Rs. 830,151·93.

3. It is not yet possible to state the total expenditure, but I have good grounds for hoping that it will not exceed Rs. 160,000.

4. If my estimate is correct, I think the net results of the fishery should give to revenue Rs. 670,000.

I am, &c.,
R. W. IEVERS,
Government Agent.

Enclosure in No. 1.

REPORT OF THE SUPERINTENDENT ON THE PEARL FISHERY OF 1903.

Inspection Report.—The inspection of November, 1902, confirmed by that of February, 1903, showed that a profitable fishery could be held on the north-east, east, and south-east portions of the Cheval Paar and on the Periya Paar Karrai.

The Fishing Days.—The fishery commenced on the 2nd March (night) on the North-East Cheval, and terminated on the 14th April. The working days of the fishery were thirty-eight days.*

Amount realized by Sale.—The amount realized by the sale of the Government share of oysters was Rs. 816,475·75. There was a break of twelve years between the last fishery (1891) and the present one. That of 1891 produced Rs. 963,749, which holds the second record, and the present fishery comes third in the past century in productiveness.

PRELIMINARY.

Camp.—Early in December I received orders from Government to make all necessary arrangements for a fishery. The work of erection of the camp buildings was entrusted by me to the Adigar of Musali, and, although he was not in office at the time of the last fishery, he carried out the works most satisfactorily.

I may here remark that the camp was built on the site selected by Sir William Twynam, K.C.M.G., and almost entirely on the same plan. I found that the rules laid down by Sir William for the performance of the duties of the police, the kottu establishment, sanitation, water supply, and general management could not be improved upon, and in effect the results were satisfactory.

Water Supply.—Meantime, in November, during the rains, the Adigar fenced in the "drinking water tank," Adappankulam, to protect it from pollution, and improved the bathing tank by forming another (Adigarkulam) below it.

Notifications; General Preparation.—Government was addressed on the subject of issuing the necessary notifications of the fishery, and the Proclamations for the establishment of a court, jail, port, police, post and telegraph offices, hospitals, &c., at Marichchikaddi. Captain Legge, Master Attendant of Colombo, Inspector of the Banks, made his arrangements for launches, stores, and for the marine conduct of the fishery. Indents were sent forward for the necessary equipment of the different official departments of the camp.

Arab Divers.—The Government of Madras was requested to notify that Arab divers would not be permitted to come to the fishery, except such men as were vouched for by known persons. The "Arabs," who are employed on the Ceylon coast in chank diving, were permitted to attend on a certificate from the local chief headman. About twenty Arabs from Colombo were also given permits. In all about eighty Arabs were engaged in diving, and their conduct gave no reason for complaint. They were much more competent than the Tamil divers, and consequently brought in better loads. They worked chiefly with the Tuticorin boats, and not separately.

I annex a copy of the notification issued by Government on the subject, together with an abstract of the valuation of the sample oysters fished both in November and February last.

---

* *Vide* note A, page 18.

Pearl Fishery of 1903.

Notice is hereby given that a Pearl Fishery will take place at Marichchikaddi, in the Island of Ceylon, on or about 22nd February, 1903.

The banks to be fished are the South-East Cheval Paar, estimated to contain 49,000,000 oysters, sufficient to employ 120 boats for forty days, with average loads of 10,000 each a day, each boat being fully manned with divers; the East Cheval Paar, estimated to contain 11,000,000 oysters, sufficient to employ 28 boats for forty days with average loads of 10,000 each a day, each boat being fully manned with divers; the North-East Cheval Paar, estimated to contain 13,000,000 oysters, sufficient to employ 32 boats for forty days, with average loads of 10,000 each a day, each boat being fully manned with divers; the Periya Paar Karrai, estimated to contain 8,000,000 oysters, sufficient to employ 20 boats for forty days with average loads of 10,000 each a day, each boat being fully manned with divers.

2. It is therefore necessary that such boat owners and divers as may wish to be employed at the said fishery should be at Marichchikaddi by the 17th February next, and it is notified that the first day's fishing will take place on the first favourable day after the 22nd February.

3. Marichchikaddi is on the mainland, 8 miles by sea south of Sillavaturai, and supplies of good water and provisions can be obtained there.

4. The fishery will be conducted on account of Government, and the oysters put up to sale in such lots as may be deemed expedient.

5. The arrangements of the fishery will be the same as have been usual on similar occasions. Persons attending the fishery camp from India will be permitted to travel to Ceylon by either of the following routes:—(1) Tuticorin to Colombo, or (2) Paumben to Marichchikaddi, and by no other.

Arrangements will be made, as at the last fishery, for travellers to proceed from Paumben direct to the Camp. The only restriction imposed on travellers by the Paumben route will be inspection by the Medical Officer at Paumben.

6. All payments to be made in ready money in Ceylon currency.

7. Drafts on the banks in Colombo or bills on the Agents of this Government in India, at ten days' sight, will be taken, on letters of credit being produced to warrant the drawing of such drafts or bills.

8. For the convenience of purchasers, the Treasurer at Colombo and the different Government Agents of Provinces will be authorized to receive cash deposits from parties intending to become purchasers, and receipts of these officers will be taken in payment of any sums due on account of the fishery.

9. No deposit will be received for a less sum than Rs. 250.

10. All communications regarding the fishery must be addressed to the Government Agent, Northern Province, Jaffna, Ceylon, and not to the Hon. the Colonial Secretary.

By His Excellency the Governor's command,

Colonial Secretary's Office,
Colombo, December 22, 1902.

EVERARD IM THURN,
Colonial Secretary.

Abstract of Valuation referred to.

	Inspection of November.					Inspection of February.				
	No. of Oysters fished.	Weight and Valuation of Pearls found.			Valuation for 1,000 Oysters.	No. of Oysters fished.	Weight and Valuation of Pearls found.			Valuation for 1,000 Oysters.
		Kalangey	Manjady.	Rs. c.	Rs. c.		Kalangey	Manjady.	Rs. c.	Rs. c.
North-East Cheval ...	2,000	—	$9\frac{5}{32}$	46 25	23 12	4,000	1	$4\frac{26}{32}$	99 89	25 0
Periya Paar Karrai ...	2,000	—	$5\frac{26}{32}$	26 50	13 25	3,000	—	$15\frac{19}{32}$	66 73	22 25
South-East Cheval ...	12,000	2	$17\frac{3}{16}$	123 0	10 25	15,000	4	$14\frac{14}{32}$	290 0	19 27
East Cheval ...	1,000	—	$5\frac{7}{32}$	18 17	18 17	6,000	2	$4\frac{18}{32}$	121 54	20 26

The notification was widely published in the local and Indian newspapers, and sent to all known merchants both in India and Ceylon, and to the Crown Agents and Government Agents in the Presidencies.

Quarantine and Plague Regulations.

Fishery Modification of Plague Regulations.—The plague regulations in force forbid passengers from India to land in any of the Northern Province ports. I was summoned to Colombo to meet the Plague Committee in this connection. After consultation, and seeing that a certain risk must be run, His Excellency was pleased to sanction a temporary modification of the regulations. It was fortunate that no epidemic was reported in Southern India in the ports from which the divers came. It was therefore settled that all ships, boats, &c., coming from India should start from Paumben (except such as used the route from Tuticorin to Colombo). Ceylon Medical Officers were to be stationed at Paumben to examine all passengers, and, if obviously healthy, passes were to be given to the boats and vessels by the Medical Officer and Superintendent of Immigration. This system worked satisfactorily, and no epidemic appeared during the fishery.

Camp Buildings.

Camp Work.—An estimate of Rs. 28,215 was submitted by the Adigar of Musali for the erection of the camp buildings at Marichchikaddi. The estimate was approved, and the Adigar was directed to start the work at once. He commenced the work in December with a gang of coolies and overseers, bringing the necessary provisions for them.

The first work was to clear the site of the camp (which is about 1 mile square) of brushwood and scrub jungle, to form the roads and streets, put up culverts, and bring in timber for the fifty Government buildings. The supply of cadjans for roof and walls (280,000) was obtained on tenders at a reasonable amount. The buildings were completed and ready for use by the 15th February.

Having been appointed Superintendent of the Fishery, I arrived at Marichchikaddi on the 20th January, and left it after the close of the fishery on the 21st April.

APPOINTMENT OF STAFF.

Mr. Horsburgh, C.C.S., who was the superintendent of kottu during the fishery of 1891, was appointed to the same responsible office for this fishery. Mr. Denham, C.C.S., Assistant Government Agent, Mannar, was appointed my Assistant and Police Magistrate for the Pearl Fishery Camp.

On his arrival at Jaffna Mr. Horsburgh prepared the necessary equipment for the Government kottu and staff, and selected counters and boat guards, arriving at Marichchikaddi on the 5th February.

Preparation of Staff.—Appointments of the Beach Master's staff, tank patrols, lamplighters, &c., were also made, and all the officers were exercised in their respective duties most carefully by Mr. Horsburgh before the opening of the actual work.

The Kachcheri staff arrived from Jaffna, &c., on the 17th February, and the "Mohideen Bux," which had been chartered for Government transport, brought the Jaffna police, the stores, Customs establishment, and superintendent of sanitation, with 120 coolies.

Boat guards were appointed to each registered boat, but I dispensed with these on the 6th April, as I found them to be practically useless. I substituted "a pass" from the beach master, which the tindals took to the bank and produced on their return with the oysters. This was found to be quite sufficient to ensure that the boat duly returned to the Government kottu. This system may in future be substituted for the boat guards.

POLICE.

Absence of Crime in Camp.—The question of a military guard to preserve order was under consideration, but it was finally decided by His Excellency the Governor that, excepting a reserve in Colombo, a local military force was unnecessary. The result proved that this was so. For there was a complete absence of serious crime in the camp, although the number of known "habitual criminals" was very considerable. The knowledge that sharp and prompt punishment under "camp rules" would follow detection or apprehension no doubt had much to do with this desirable state of things.

Good Conduct of the Police.—The police force consisted of 90 men from Colombo, many of them pensioners re-employed, and 20 men from Jaffna, with 10 sergeants in all. Inspector Ludovici was in charge, and I am glad to testify to the excellent conduct of the force. The Indian merchants publicly praised the police protection afforded, and only asked that they may be given more men, "as they had to guard against thieves who had come from India."

MEDICAL ARRANGEMENTS.

Medical.—Separate buildings on suitable sites were put up for a general hospital, cholera hospital, plague hospital, and quarantine hospital, and additional buildings were provided for the medical officers' quarters, outdoor dispensary, medical stores, &c. The Acting Colonial Surgeon, Northern Province, was in immediate charge of the medical business of the camp. I have to thank him for much of the success of the fishery. Nothing could exceed his zeal and devotion to duty in the hard work occasioned by the sickness, which was almost universal. He was assisted by three medical men and a port officer, all of whom performed their duties satisfactorily. As a separate medical report will be furnished, I need not here discuss the statistics. A large supply of medicines, disinfectants, &c., was supplied; and of these a large portion was returned to Colombo at the close of the fishery.

Health.—Although the camp was providentially saved from cholera or plague, "fever," "chill," &c., were surprisingly prevalent, and at one time quite half the Government staff was incapable of work; many had to be sent home and replaced. The effect on the traders, camp population, and labour force I refer to elsewhere.*

The weather was probably responsible for this sickness. The nights were extremely cold and the days were scorching hot during the first half of the fishery. In my opinion, this had much to do with the sickness, for mosquitoes were entirely absent.

PLAGUE PRECAUTIONS.

An unusually heavy expenditure was incurred by the Medical Department for the purpose of supplying the necessary medicines and equipments required in the event of an outbreak of plague; and it was pleasant to be able to return the whole stock to Colombo at the close of the fishery.

As a precautionary measure in the event of any epidemic occurring in camp, quarantine hospitals were put up at Mannar, Puttalam, and Anuradhapura, the expenditure being charged to the fishery.

POSTAL ARRANGEMENTS.

A Post and Telegraph Office with money order business was opened early in February, and after discussion with the Postmaster-General as to the choice of land or sea routes, it was settled that all valuable packets and registered letters should be sent by the B. I. steamers weekly, and later on bi-weekly, while a land tappal service should run for ordinary postal matter.

As Superintendent of Fishery I had nothing to do with the postal arrangements, and I merely note the fact. It might be interesting to obtain figures as to the work done, the declared value of pearl packets despatched, and the revenue and expenditure of the Camp Post Office. This will no doubt be supplied by the Postmaster-General.

CUSTOMS.

The port was placed in charge of Mr. Leembruggen, the Sub-Collector of Kankesanturai. Although the trade beyond sea was of course inconsiderable, the coastwise trade and the passenger traffic by the steamers running from Paumben and Colombo was very great. The revenue from this service was Rs. 1,534·62. The export of oysters was enormously greater than in previous fisheries.

* Sir William Twynam tells me that in 1890 the camp suffered in the same way from influenza.

Steamer Service.

During the previous fisheries the sailing vessels chartered by Government for pearl fishery work were engaged in taking passengers to and from Paumben. This year the British India Steam Navigation Company arranged a service regularly on Tuesdays and Fridays from Colombo and Paumben to Marichchikaddi. The journey was made much easier and shorter, and I have no doubt, with the experience gained at this fishery, the Company will hereafter be able to make better provision for the native passengers' comfort. The steamer service from Paumben to Mariehchikaddi and that of the railway from Madura to Mandapam no doubt contributed largely to the convenience of the travellers, but the unusual coming and going of people this year at Marichchikaddi is mainly due to these causes, and prevented any census or enumeration of a shifting population.

Court Arrangements.

Mr. Denham, the Assistant Government Agent and Police Magistrate, Mannar, was gazetted to hold his court at Marichchikaddi, and was also appointed Additional Police Magistrate for Puttalam District, as Pukkulam, a village belonging to the latter district, is situated close to the camp on the other side of the river. The Secretary and Interpreter of the District Court, Mannar, attended to the court work, which was very light.

Water Supply.

Arrangements for Daily Supply of Water.—As stated before, the Adappankulam (tank) was the only source permitted for supply of drinking water to the camp, except in the case of officials, who obtained a supply from the village well at Marichchikaddi. The tank was well secured. Patrols were appointed to prevent people from polluting the water. Two cisterns were constructed below the tank, and coolies were engaged in taking out the water from the tank and filling in the cisterns from which the public were supplied. About half a dozen water carts were employed for the supply of the water to the Government officers and others engaged in the Pearl Fishery service. The water supply was abundant, and sufficient for three months beyond the term of closing the camp. Malicious rumours were spread several times during the fishery that it was closing from want of water or cholera. The taking of drinking water from the bathing tanks was prohibited, and patrols and police were on guard to prevent any breach of the rule.

Sanitation.

A large supply of disinfectants was in stock, and a gang of about 120 coolies, under the supervision of the sanitary officer, Jaffna, attended to the sanitation of the camp. The people behaved very well and readily obeyed the rules as to sanitation, so that at all times the camp was clean and void of offensive smells, except such as are inseparable from rotting oysters.

Allotment of Quarters.

The Divisions of the Camp in Streets and Quarters.—The divers' quarters were fixed at the north of the camp abutting on Main street, and were divided between the Moor and Paraya divers, care being taken that sufficient space was left between each row of buildings so as to admit of free ventilation.

Sites for the boutiques of general merchandise were allotted in the "Main street" and "Tank street." All applications for boutique sites on the side of the divers' quarters were refused. Sites for "Muttu Bazaar" or pearl shops were given in the "New" and "Old" Moor streets. The Chetties who speculated in oysters were given quarters in the "Chetty street," but fashion changed since the last fishery, and the pearl merchants for the most part bought out the occupants of Main street, and moved there from the "Moor" and "Tank" streets. The cloth merchants were also located in the "Chetty street." The Government officers were located apart from the trading town.

As in previous fisheries, the private "kottus," or oyster-washing grounds, were set apart along the seaside on the northern side of the Government kottu and the camp. The arrangement worked very satisfactorily.

A Fee charged for Shop Sites.—Hitherto sites for shops were allowed free. I decided this year that a fee of Rs. 10 for a site of 12 feet square facing any street should be paid, and this was readily acceded to by the traders. A sum of Rs. 4,334 was realized by Government from this source.

Divers and Boats.

A local festival among the Moors of Keelakkarai kept them back for some time, but the divers from other places, such as Tuticorin, Tondi, Mandapam, Mannar, &c., were all in the camp by the 15th February. The Keelakkarai men, however, arrived in time, and they were all ready to start to the banks on the 22nd February, the gazetted date of the fishery. But, owing to various reasons, it was considered desirable to defer the commencement of the fishery until after the first of March. The boats were registered and numbered in the meantime. By the end of February there were 260 boats and about 2,000 divers.* The boats were registered in two fleets, the white and the red. It was considered advisable to send each fleet every other day, as the kottu accommodation was not sufficiently large to work all the boats together, and they would have glutted the market.

There were only from sixty to eighty Arab divers in the camp. They were admitted on their being certified as to character by some one known to me. They were excellent divers, and, being few in number, they were obedient and docile, and gave no such trouble as happened at previous fisheries.

Commencement of the Fishery.

The necessary arrangements having been completed, the fishery was fixed to commence on the 1st March, and a publication was made to the effect that the white fleet was to go out that night, but the divers and their boatmen insisted on both the fleets being allowed to go together. But this was considered undesirable for more than one reason. The result was that no boats went that night. The next day, however, a list of the Ceylon boats who were willing to go was prepared, and then the other boats agreed to go to the banks in the fixed order, and ninety-nine of the white fleet went out, but took almost all the available divers. They brought in Government share of 987,000 oysters from the North-East Cheval Paar.

* The actual number varied much from time to time.

Regulations of the Two Fleets.—The red and the white fleets then went alternately, but the divers of both the fleets, in their eagerness for gain, went out daily. This undoubtedly tended to shorten the fishery, as it was not possible for the divers to work continuously for much more than a month—the large Tuticorin and Paumben boats took out from twenty to thirty divers daily. On the fourth day of the fishery the boats brought in 1,178,900 oysters as Government share, a total of 1,768,350 oysters in the kottu. Some of the Tuticorin men tried to rush out without division of share, and there was considerable confusion. Next day a redistribution of compartments was made in the kottu, by which the Tuticorin men were given more space and placed in No. 1 and 2 totties, additional counters were supplied, and a strong force of police posted within easy reach of the exit. Seeing these precautions, the Paravas gave no further trouble, nor was any experienced afterwards in any "totti."

Sale of Oysters.

The Government share of the oysters was sold by public auction daily at 9 P.M., an inconvenient hour for the officials concerned, and entailing sometimes a long night's work for the clerks; but it seems to be the time that best suits the merchants and dealers.

During the first few days the prices were very low, as the traders were uncertain of the supply of pearls. But when it was seen that the North-East Cheval Paar was rich in pearls prices rose, and continued high to the end of the fishery. The range was from Rs. 20 to Rs. 50 per thousand.

Export to Colombo.—A notable feature of the fishery was the great number of purchasers in small lots of 2,000 to 5,000. This tended to keep up prices. The sale sometimes ran to nearly 200 lots. Another novelty was the large export to Colombo. Although Colombo traders purchased largely at the Government sales, the chief purchasers were from the divers, who readily disposed of their shares in the evenings to Sinhalese, who at once loaded them in outrigger canoes and reached Colombo in twenty-four hours. These canoes were, I am told, paid Rs. 15 per 1,000, and could take from eight to ten thousand oysters; so their profit must have been very great. The total export of oysters was 4,530,725.

Merchants and Traders.

Merchants and traders from different parts of the Island and India were already in the camp long before the commencement of the fishery. Various articles of merchandise, such as clothes, brassware, earthenware, rice, curry stuffs, vegetables, mats, baskets, and several other articles too numerous to mention, were brought in, and boutiques rapidly ran up in the Main road, Tank road, and Divers' road, on the sites set apart for the purpose. Marichchikaddi, from being a waste plain, speedily became a busy town with people of the most diversified races. The port looked picturesque and busy with boats, steam launches, sailing vessels, and occasionally steamers in the harbour. It was not found possible to make a census—the influx and outgoing was so continuous—but it is not an outside estimate to say that for a considerable time there were quite 40,000 people in the "Camp Town."

Several merchants from Bengal, Bombay, and Southern India, in the Continent, and from Colombo, Kandy, Galle, Jaffna, and other places in the Island, were present with large amounts of specie and letters of credit.

Indian Notes and Money Market.

Most of the merchants from India brought in large supplies of Indian currency notes, which they tendered in payments, although the notification of the fishery stated that all payments should be made in Ceylon currency. Under the circumstances, and with the concurrence of Government, these notes were accepted at ½ per cent. discount on all payments made into the Kachcheri on account of value of oysters purchased, while a discount of 1 per cent. was charged on moneys offered for change. This course must be adopted at subsequent fisheries, if the traders continue to bring Indian notes instead of bank credits, which would be so much more convenient to all parties. Merchants were freely allowed to deposit cash in the local Treasury and in Colombo against their purchases.

Visitors.

Another novelty at this fishery was the unprecedented number of visitors. The arrangements made by the British India Company's steamers allowed of a few days' stay in camp, and this was taken advantage of to a great extent. But as I had not anticipated this, considerable inconvenience was experienced for want of accommodation. It will be necessary at the next fishery to provide a large (temporary) resthouse to accommodate visitors.

His Excellency the Governor paid a visit to the camp on two occasions, and in the second was accompanied by Members of the Executive and Legislative Councils. Among His Excellency's guests were the Right Honourable Sir Michael Hicks-Beach and the Earl of Crewe.

European Speculators.

Besides the native merchants from India and Ceylon, several Europeans carried on the unpleasant business of rotting and washing oysters. A Colombo syndicate worked by Messrs. Megget and Kirk was, I understand, successful in the financial results.

Arrangements at the Banks.

The arrangements at the banks were in the hands of Captain Legge, the Master Attendant and Inspector of Pearl Banks. He was stationed on the banks on board the "Rengasami Puravi," and the arrangements were similar to those of the previous fisheries, except that additional launches were employed.

The time for the departure of the boats to the banks was signalled by gun fire at 1 o'clock in the night, and the beach master saw that the boats were duly counted and started in good time. The steam launches accompanied them both while going and returning. Boatmen were reported at times to have fished out of the tract marked out for fishery, and for this they were punished by me as Superintendent.

PROGRESS OF FISHERY.

The fishery commenced on the 2nd March and lasted up to the 15th April. There were in all 38 days' fishing; as usual, there was no fishing on Sundays.

The following statement shows the order in which the different banks were fished and the number of days spent on each :—

		Days.
1.	North-East Cheval	10
2.	East Cheval	14
3.	Periya Paar Karrai	2
4.	South-East Cheval	7
5.	East and South-East Cheval	4

The North-East Cheval Paar was the richest in pearls, and the dealers who purchased from this are said to have made very large profits. The pearls from the other portions of the Cheval Paar, although numerous, were not of such good quality.

The Periya Paar Karai was fished for two days only, as the divers were discontented at the depth of the water and preferred to fish on the shallow and well-stocked beds of the Cheval.

LABOUR SUPPLY.

At the commencement of the fishery there was a large supply of labour in the camp. The large Coast boats arrived swarming with divers and their families and household goods and coolies.

Coolies came in both by land and sea, and at first earned 75 cents a day. But later on, when having secured what they considered sufficient, or scared by the prevalent fever, they departed in large numbers, the demand for labour was out of all proportion to the supply. It became difficult to get coolies to do more than six hours' work a day for a wage of Rs. 2 or 2·50; consequently, towards the end of the fishery, the Chetties sent their purchases of oysters by boats to the coast to be there washed and worked.

I dare say at the next fishery the Chetties will arrange to bring their own labour force. As there has been no fishery for twelve years many of the traders were inexperienced in local conditions. This will no doubt be allowed for at the next fishery.

FOOD SUPPLY.

The food supply of the camp was very satisfactory. All the necessaries of life could be had in abundance, and the prices were not unusually high. Boutiques for the sale of every article of food, such as rice, vegetables, curry staff, salt, and the like, were opened in large numbers. Two liquor shops and nine taverns were permitted. The taverns were, as usual, confined to the divers' quarters on the north of the Main street. The supply of fish was satisfactory, as the Sinhalese canoes brought in a large supply of sea fish daily, and the Tamils netted the small fish in the lagoon at the mouth of the river.

The fishery was closed on the 15th April. The oysters brought during the three preceding days were much mixed with young oysters and the quantity was small; I therefore deemed it desirable to close the fishery.

It was neither paucity of oysters nor bad weather that caused the closing. The divers were worn out by incessant work and had got sufficient gain. They only remained on at my request for the last week and worked listlessly, taking no care to secure well-grown oysters or a sufficient quantity. Seeing this, there was no option but to let them go. The Erukkalampiddi (Mannar) divers went away early, and without permission, which will be remembered at the next fishery. Next went the Tuticorin boats, about 2nd April, on allegations of sickness and want of divers. The Keelakkarai people remained to the end and did the best service.

GENERAL RESULTS OF THE FISHERY.

The total number of oysters brought in as Government share was 27,453,425. As this figure only represents two-thirds of the oysters fished, the total number of oysters fished must equal 41,180,137. But there is reason to believe that the total number fished was much larger, for it is notorious that the boats open a large quantity of oysters and secrete their pearls, notwithstanding all precautions on the part of Government. I think it not unreasonable to estimate that one-eighth more might be added to the total number of oysters actually fished, or equivalent to about forty-six million oysters.

The fishery may be said to have been a very satisfactory one to all concerned. It brought Government 8¼ lacs of rupees, and ranks third in the fisheries hitherto conducted by the British Government. The merchants were pleased, and the divers and boatmen were satisfied with their gains.

REVENUE AND EXPENDITURE.

The total collection of the fishery by sale of oysters was Rs. 816,475·75. To this must be added the following items :—

		Rs.	c.
1.	Amount of Customs collections	1,534	62
2.	Amount of Revenue by the Postal and Telegraph Department ...	4,150	0
3.	Fines and forfeitures paid in by the Police Court	505	25
4.	Amount recovered for boutique sites	4,334	0
5.	Value of confiscated and sample pearls	2,700	0
6.	Confiscated money	17	17
7.	Amount recovered from the arrack renter for sale of arrack at the fishery	2,000	0
8.	Fines recovered from boatmen	628	0
9.	Commission on India notes	1,445	14
10.	Miscellaneous	512	0
	Total ...	17,826	18

The total expenditure cannot now be ascertained; there are many more charges to be met. The following, however, is a rough estimate:—

		Rs.	c.
1.	Salaries and allowances, Superintendent's establishment ...	54,640	96
2.	Do. of Customs	2,147	48
3.	Do. of Police	10,822	7
4.	Do. of Postal Department	1,945	38
5.	Do. of Medical Department	8,841	40
6.	Pay of substitutes	4,107	65
7.	Cost of camp buildings	32,596	75
8.	Cost of extending telegraph line	737	41
9.	Master Attendant's expenditure	26,032	59
10.	Medical stores	2,651	72
11.	Pearl fishery stores and articles	9,726	57
12.	Transport charges	4,026	56
13.	All other charges	9,108	32
	Total ...	167,384	86

The net revenue would therefore be Rs. 666,917·07.

Pearl Market.

The trade in pearls was very brisk, and the prices paid were unprecedented. This is chiefly owing to the fact that no fishery was held in Ceylon for the last twelve years, and to the demand in the Indian and English markets.

It is generally believed that the fishery of 1903 turned out very good single pearls, many of which were sold for prices varying from Rs. 500 to 3,000. About the close of the fishery, when most of the merchants had closed their business, it was not possible either to sell or purchase any pearls, the prices offered in the case of sales being too low, and those demanded from purchasers being very high.

Crime.

There was little or no crime in the camp, with the exception of a single case of rape committed on an Indian girl by one of her own people. The cases taken before the Magistrate were all of a trivial nature, being mostly nuisance cases and petty thefts.

Casualties.

Three deaths occurred among divers at sea, the cause assigned being inexperience, and consequently remaining down too long.

There was a most satisfactory absence of camp fires, which is extraordinary, considering the inflammable nature of the buildings and the use of kerosine oil now universal. The only one was in a small hut occupied by a confectioner, which caught fire accidentally from the oven. The fire was promptly put out before it could do any damage to the adjoining buildings.

Two boats laden with oysters capsized, but they were recovered without loss of life.

Weather.

The weather was extremely hot till the 7th April, and the nights during February and March were cold and dewy. There were refreshing showers during the second week of April, which mitigated the heat to a great extent.

The wind was from the land during the nights and from the sea during the daytime, being what is called the "pearl fishery weather," without interruption from beginning to end, with the exception of 30th March, when the south-west wind came up strong, and was believed to be the "little monsoon." After this the weather set fair again, and continued so to the close of the fishery.

Sale of Arrack.

Sale of arrack during previous fisheries was conducted on Government account. On this occasion I agreed with the Mannar arrack renter to carry on the business at a slight increase in price over the amount obtained as profit to Government at the last fishery. The business was carried out by him satisfactorily and without complaint.

Returns.

I annex the following returns of:—

(1) A sketch of the pearl banks fished.
(2) Statement of oysters fished and sold.
(3) Account particulars of Government share of oysters fished and sold.
(4) Statement showing the number of diving boats, divers, and manducks that arrived at the fishery.
(5) Statement of diving boats employed at the fishery.
(6) List of boats and divers engaged in the fishery.
(7) Statement of sample pearls, &c., sold.
(8) The result of the fishery.
(9) Statement of oysters exported.
(10) Statement of Customs revenue.
(11) Note A on the statistics of estimates and number of days' fishing.

MISCELLANEOUS NOTES.

Diving.—A European diver was employed for some time on the banks in examination of the surface of the oyster banks and in obtaining specimens for scientific investigation. Captain Legge, who was most zealous in the inquiry, himself went down frequently, and will, no doubt, detail his experiments in his report.

The Hon. Mr. im Thurn, Lieutenant-Governor, also personally used the diving apparatus on several occasions on his visit to the banks.

Visit of the Inspector of Tuticorin Fishery.—At the instance of the Government of Madras, Captain Baddeley, Master Attendant of Tuticorin and Inspector of Pearl Fishery, visited the banks and camp, and was afforded information regarding the Ceylon method of conducting a fishery.

Alleged highest Day's Sale.—The seventeenth days' fishing is asserted to be "a record," 200 boats brought as Government share 1,286,935 oysters, which sold (at an average price per 1,000 of Rs. 37 to 49) for Rs. 48,256·84.

Sale of Pearl Oyster Shells.—Although a sale of the shells remaining about the camp after the fishery was advertised, it was considered expedient not to sell them, because it is possible they may be required in connection with the scientific experiments on the banks.

Experiments.—A visit was paid last year to the banks by Professor Herdman, and under his instructions Mr. Hornell resided on the banks with Captain Legge from the beginning of February to the 23rd April, engaged in studying the life-history of the oyster and the conditions indicated to secure continuity of fishery.

Experiments were carried out by Mr. G. G. Dixon as to obtaining an improved method of separating the pearl from the oyster.

Staff.—The fishery having closed on the 15th April, the Colombo police were despatched by steamer on the 17th, and the Jaffna men were retained and sent, together with the camp stores and coolies, by the "Mohideen Bux" on the 24th. The Government kottu establishment was paid off on the 17th, and the officers formally thanked by me for the zealous and efficient manner in which their work had been done under many difficulties. I must take this opportunity of bringing to the notice of Government the invaluable aid and assistance I received from the cordial co-operation of Mr. Horsburgh, Superintendent of Kottu, and Mr. Denham, Police Magistrate, who assisted me in the Kachcheri work and accounts and police. Mr. Denham, during the illness of Mr. Horsburgh, was also in charge of the kottu work.

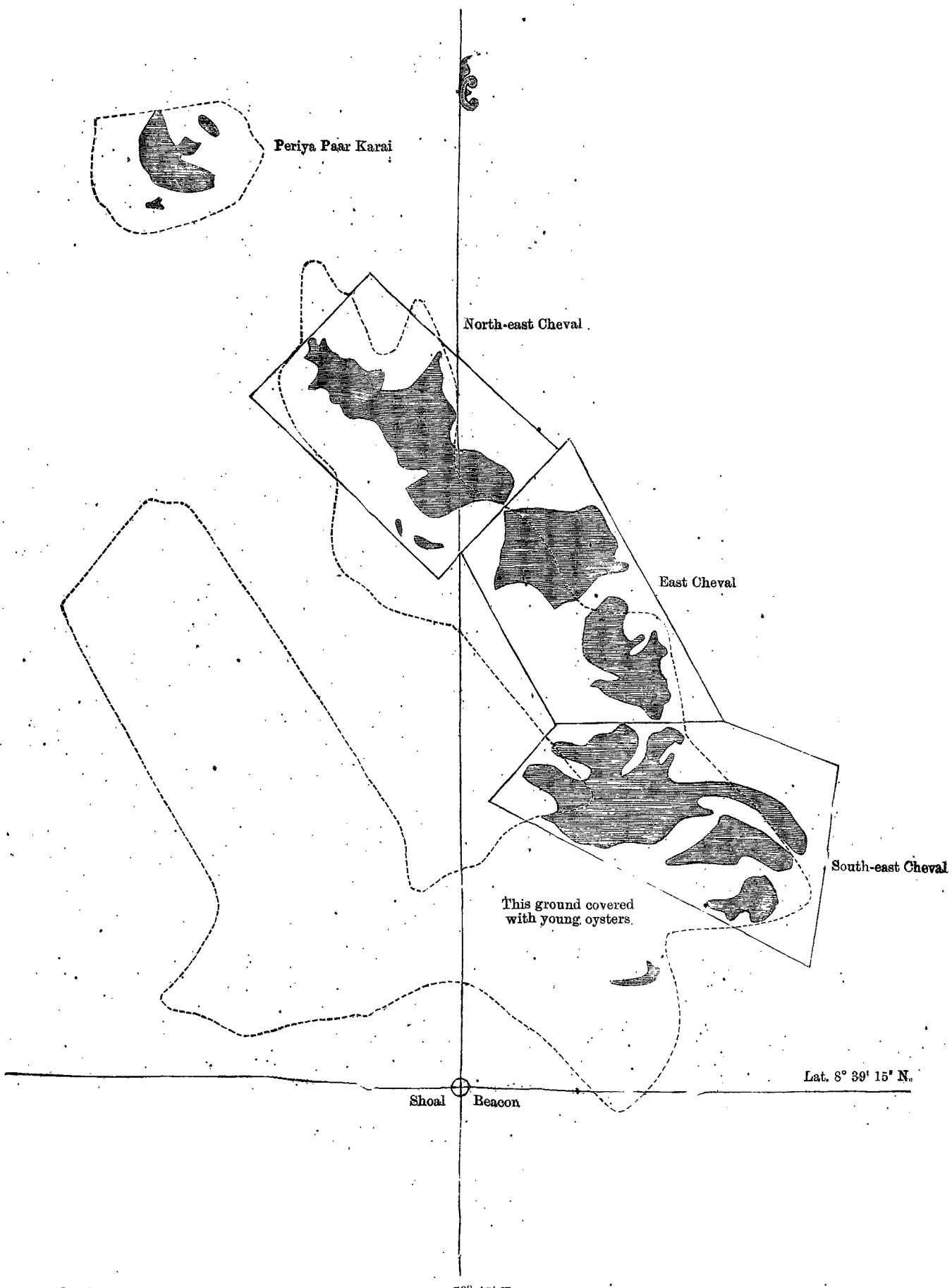
When all the subordinate officers worked so well, it is not easy to particularize individuals, but if this is possible, I would desire to specify Mr. Inspector Ludovici, in charge of Police; Mr. Sabaretnam, Chief Mudaliyar; Mr. Vettivelu, late Adigar, Acting Shroff; and Mr. Muttutamby, Beach Master. I need hardly say that without the assistance of Mr. Vrasspillai, who was indefatigable, my work would have been much more arduous and unprofitable. The Adigar remained to see off the stores and secure what was to be kept for the next fishery, and, leaving the remaining camp work in his charge, I left for Jaffna on the 21st April.

Jaffna Kachcheri,
May 19, 1903.

R. W. IEVERS,
Government Agent and Superintendent
of Pearl Fishery.

Oysters on the Eastern Cheval Paar, February, 1903.

Scale : one inch to a nautical mile.



Name of Bed.	Area.	Estimated Number of Oysters at 5 Square Yards to a Dive.	Estimated Number of Oysters at 3 Square Yards to a Dive.	Average Number of Oysters to a Dive.	Number of Dives to Clear Bed.	Number of Days' Fishing to Clear Bed (200 Boats at work).	Number of Dives to clear Bed.	Number of Days' Fishing to clear Bed (200 Boats at work).
	Acres.							
Periya Paar Karrai ...	191	4,180,000	6,967,000	22	190,000	Two	316,667	$3\frac{1}{3}$
North-East Cheval ...	481	10,111,000	16,829,000	21	481,476	Five	802,460	$8\frac{1}{3}$
East Cheval, North Bed ...	398	8,092,000	13,487,000	22	368,090	Four	613,482	$6\frac{2}{3}$
East Cheval, South Bed ...	314	10,032,000	16,720,000	33	304,000	Three	506,666	5
South-East Cheval ...	488	15,142,000	25,237,000	32	473,200	Five	788,666	$8\frac{1}{3}$
Total ..	1,872	47,557,000	79,250,000	27	1,816,766	Nineteen	3,027,941	$31\frac{2}{3}$
Total on Cheval Paar	1,681	43,377,000	72,283,000	26	1,626,766	Seventeen	2,711,274	$28\frac{1}{3}$
					All calculations in these two columns are allowing five square yards to a dive.		All calculations in these columns are allowing three square yards to a dive.	

Explanation of Table.

Five square yards is the flat surface a diver is supposed to clear. (N.B.—Very improbable.)
Three square yards is the same. (N.B.—Still a large estimate.)

Formula for calculating Number of Days to clear a bank.

(Supplied by Captain Legge, Inspector of Banks.)

Estimated average number of oysters to one dive multiplied by the number of dives one diver can make on one day (*i.e.*, 50), result multiplied by number of divers in one boat (*i.e.*, 10), equals one boatload. Number of boats (*i.e.*, 200) multiplied by previous result (*i.e.*, number of boatloads), and result (which is one day's total of fishing) divided into estimated total of oysters on the bed, equals number of days' fishing required to clear the bed.

Statement of Oysters showing the Quantity fished, Government Share, Rates at which the Oysters were sold per 1,000, and Amount realized by Government.

Date.	Day of Fishing.	No. of Boats.	Quantity of Oysters fished.	Government Share.	Rate sold at per 1,000.	Amount realized of Government Share.
						Rs. c.
1903.						
March	3	1	99	445,500	297,000	Rs. 30	8,910 0
Do.	4	2	122	2,104,860	1,403,240	Rs. 19, 20, 21, 26 ...	30,365 67
Do.	5	3	125	1,181,167	787,445	Rs. 21, $22\frac{1}{2}$, 23	17,553 24
Do.	6	4	131	1,618,350	1,078,900	Rs. 23, $23\frac{1}{2}$, 24, $24\frac{1}{2}$ ...	25,218 20
Do.	7	5	129	1,347,960	898,640	Rs. 24, 25, $25\frac{1}{2}$, 26, $26\frac{1}{2}$, 27 ...	22,544 78
Do.	9	6	132	414,000	276,000	Rs. $32\frac{1}{2}$, 33, $33\frac{1}{2}$, 34, $34\frac{1}{2}$, 35 ...	9,213 80
Do.	10	7	48	1,011,375	674,250	Rs. 28, $28\frac{1}{2}$, 29, $29\frac{1}{2}$, 30, $30\frac{1}{2}$, 31	19,933 50
Do.	11	8	134	207,000	138,000	Rs. 28, $28\frac{1}{2}$	3,903 0
Do.	12	9	132	2,115,210	1,410,140	Rs. 22, $22\frac{1}{2}$, 23, $23\frac{1}{2}$, 24, $24\frac{1}{2}$, 25, 26, 27, 28, $28\frac{1}{2}$, 29, $29\frac{1}{2}$, 31	36,703 90*
Do.	13	10	133	577,073	384,715	Rs. 22, 36, $36\frac{1}{2}$, 37, 38, 39, $39\frac{1}{2}$, $40\frac{1}{2}$, $45\frac{1}{2}$, 50, $51\frac{1}{2}$	13,536 24
Do.	14	11	136	547,815	365,210	Rs. 40, $40\frac{1}{2}$, 41, $41\frac{1}{2}$, $42\frac{1}{2}$, 43, $43\frac{1}{2}$, $44\frac{1}{2}$, 46	14,953 53
Do.	16	12	138	587,865	391,910	Rs. 35, $35\frac{1}{2}$ 36, $36\frac{1}{2}$, 37 ...	14,054 85
Do.	17	13	132	816,532	544,355	Rs. $33\frac{1}{2}$, 34, $34\frac{1}{2}$, 35, $37\frac{1}{2}$ ...	18,806 25
Do.	18	14	136	1,682,963	1,121,975	Rs. 35, 36, $36\frac{1}{2}$, $37\frac{1}{2}$ ...	40,087 59
Do.	19	15	136	1,156,733	771,155	Rs. $37\frac{1}{2}$, $38\frac{1}{2}$, 39, 40, $40\frac{1}{2}$, 41, 42, $42\frac{1}{2}$, 43, 44, 45	31,500 70
Do.	20	16	198	1,118,280	745,520	Rs. $40\frac{1}{2}$, 41, $41\frac{1}{2}$, 42, $42\frac{1}{2}$, 43 ...	30,732 60
Do.	21	17	200	1,927,402	1,284,935	Rs. 35, 36, $36\frac{1}{2}$, 37, $37\frac{1}{2}$, 38, $38\frac{1}{2}$, 39, 40, 41, 44	48,183 84
Do.	23	18	199	899,963	599,975	Rs. $35\frac{1}{2}$, 36, $36\frac{1}{2}$, 37, $38\frac{1}{2}$ ...	21,792 10
Do.	24	19	200	1,173,420	782,280	Rs. $35\frac{1}{2}$, 36, $36\frac{1}{2}$, 37, $38\frac{1}{2}$ ...	28,142 86
Do.	25	20	199	590,445	393,630	Rs. 37, 39, 40, 41, $43\frac{1}{2}$ ...	15,095 20
Do.	26	21	154	1,620,487	1,080,325	Rs. $32\frac{1}{2}$, 33, $33\frac{1}{2}$, 34, $34\frac{1}{2}$, 36, 38, 40	36,395 39
Do.	27	22	196	834,000	556,000	Rs. 30, 31	16,905 0
Do.	28	23	193	2,041,913	1,361,275	Rs. $29\frac{1}{2}$, 30, $30\frac{1}{2}$, 31, 32, $33\frac{1}{2}$, 35 ...	41,714 80
Do.	30	24	191	2,756,130	1,837,420	Rs 21, 22, 23, $23\frac{1}{2}$, 24, 25, $25\frac{1}{2}$ ...	41,370 8
Do.	31	25	161	1,649,423	1,099,615	Rs. 25, $26\frac{1}{2}$	28,689 79
April	1	26	40	320,070	213,380	Rs 27, $27\frac{1}{2}$, $29\frac{1}{2}$, 30, 31, $35\frac{1}{2}$ ...	6,235 71
Do.	2	27	111	1,213,800	809,200	Rs. $23\frac{1}{2}$, 24, $24\frac{1}{2}$, 25 ...	19,532 30
Do.	3	28	149	1,645,267	1,096,845	Rs. 23, $23\frac{1}{2}$, 24, $24\frac{1}{2}$, 25, $25\frac{1}{2}$, 26	25,785 36
Do.	4	29	148	1,353,713	902,475	Rs. $22\frac{1}{2}$, 23, $23\frac{1}{2}$, 24, 27 ...	21,181 93
Do.	6	30	120	516,930	344,620	Rs. 24, 28, $28\frac{1}{2}$, 29, 30, $30\frac{1}{2}$, 31, 32	10,567 86
Do.	7	31	103	987,397	658,265	Rs. 28, $28\frac{1}{2}$, 29, $29\frac{1}{2}$, 31, 33 ...	18,545 25
Do.	8	32	116	1,855,005	1,236,670	Rs. 27, 28, $28\frac{1}{2}$, 36 ...	34,705 62
Do.	9	33	116	1,251,945	834,630	Rs 33, $33\frac{1}{2}$, 34, $34\frac{1}{2}$, 35, $35\frac{1}{2}$, 39...	27,918 7
Do.	10	34	92	534,413	356,275	Rs. $41\frac{1}{2}$, 42, $43\frac{1}{2}$ ...	15,044 46
Do.	11	35	97	151,717	101,145	Rs. 50	5,057 25
Do.	13	36	95	532,777	355,185	Rs. $25\frac{1}{2}$, $26\frac{1}{2}$, 27, 31 ...	9,825 72
Do.	14	37	88	244,837	163,225	Rs. $28\frac{1}{2}$, $32\frac{1}{2}$, 33, 38 ...	4,862 31
Do.	15	38	67	135,900	90,600	Rs. 10	906 0
				41,169,637	27,446,425		816,475 75†

* Includes Rs. 105 paid on March 15, 1903.
† Includes value (Rs. 984·30) of oysters bought by Mr. Dixon on Government account.

Account Particulars of Government Share of Oysters fished and sold during the Pearl Fishery of 1903.

No. of Oysters.	Rate per 1,000. Rs. c.	Amount. Rs. c.	No. of Oysters.	Rate per 1,000. Rs. c.	Amount. Rs. c.
90,600	10 0	906 0	167,355	34 50	5,773 75
437,130	19 0	8,305 47	825,910	35 0	28,906 85
288,110	20 0	5,762 20	699,000	35 50	24,814 50
924,000	21 0	19,404 0	1,496,360	36 0	53,868 96
1,051,000	22 0	23,122 0	630,975	36 50	23,030 59
412,000	22 50	9,270 0	684,280	37 0	25,318 36
1,901,820	23 0	43,741 87	247,000	37 50	9,262 50
1,101,845	23 50	25,893 36	146,000	38 0	5,548 0
1,640,375	24 0	39,369 0	242,000	38 50	9,317 0
348,530	24 50	8,538 98	362,630	39 0	14,142 57
615,000	25 0	15,375 0	8,000	39 50	316 0
474,185	25 50	12,091 72	448,785	40 0	17,951 40
449,000	26 0	11,674 0	459,000	40 50	18,589 50
884,615	26 50	23,442 29	350,935	41 0	14,388 34
655,640	27 0	17,702 28	199,000	41 50	8,258 50
117,000	27 50	3,217 50	432,000	42 0	18,144 0
1,702,870	28 0	47,680 36	208,520	42 50	8,862 10
864,000	28 50	24,624 0	94,210	43 0	4,051 3
426,855	29 0	12,378 80	107,275	43 50	4,666 46
476,380	29 50	14,053 21	18,000	44 0	792 0
1,292,000	30 0	38,760 0	13,000	44 50	578 50
135,000	30 50	4,117 50	1,000	45 0	45 0
588,000	31 0	18,228 0	5,000	45 50	227 50
347,275	32 0	11,112 80	12,000	46 0	552 0
663,225	32 50	21,554 81	106,145	50 0	5,307 25
697,265	33 0	23,009 75	5,000	51 50	257 50
10,000	33 38	333 80			
392,325	33 50	13,142 89	27,446,425		816,475 75*
491,000	34 0	16,694 0			

* Includes value (Rs. 984·30) of oysters bought by Mr. Dixon on Government account.

Account showing the Number of Diving Boats and the Number of Divers and Manducks that have Daily arrived from each Port during the Pearl Fishery of 1903.

Date.	Colombo.		Jaffna.		Devipatam.		Tuticorin.		Paumben.		Keelakarai.		Mannar.		Tondi.	
	Boats.	Divers and Manducks.	Boats.	Divers and Manducks.	Boats.	Divers and Manducks.	Boats.	Divers and Manducks.	Boats.	Divers and Manducks.	Boats.	Divers and Manducks.	Boats.	Divers and Manducks.	Boats.	Divers and Manducks.
1903.																
February 16	2	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Do. 19	2	40	—	—	—	—	17	930	—	—	—	—	—	—	—	—
Do. 20	—	—	1	30	—	—	10	735	—	—	—	—	—	—	—	—
Do. 21	1	24	2	50	—	—	2	136	—	—	—	—	—	—	—	—
Do. 22	3	90	—	—	—	—	3	128	1	30	—	—	—	—	—	—
Do. 23	—	—	3	80	—	—	—	—	1	32	—	—	—	—	—	—
Do. 24	—	—	—	—	—	—	—	—	4	120	28	530	—	—	—	—
Do. 25	1	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Do. 26	—	—	—	—	—	—	—	—	—	—	33	914	—	—	—	—
Do. 27	—	—	—	—	—	—	—	—	—	—	29	700	—	—	—	—
Do. 28	—	—	8	240	—	—	—	—	—	—	16	366	4	120	—	—
March 1	—	—	—	—	—	—	—	—	—	—	30	826	—	—	—	—
Do. 2	—	—	—	—	—	—	1	40	4	120	11	306	—	—	3	121
Do. 3	—	—	—	—	1	30	1	20	2	60	2	60	—	—	1	25
Do. 4	—	—	—	—	3	90	—	—	1	30	—	—	—	—	1	25
Do. 10	—	—	—	—	—	—	—	—	1	30	1	30	—	—	—	—
Do. 11	—	—	—	—	—	—	—	—	—	—	—	—	8	240	—	—
Total ...	9	214	14	400	4	120	34	1,989	14	422	150	3,732	12	360	5	171

Remark.—The total number of boats engaged in diving is 276; of these, 242 boats arrived with divers, the others were hired here by drivers.

Memorandum of the Number of Diving Boats employed in the Fishery of 1903, showing the Ports to which they belong and the distinguishing Colour of their Flags.

	Colour.	No.		Colour.	No.
Tuticorin ...	Red ...	18	Mannar ...	Red ...	2
Do. ...	White ...	16	Do. ...	White ...	10
Colombo ...	Red ...	4	Tondi ...	Red ...	4
Do. ...	White ...	5	Do. ...	White ...	1
Jaffna ...	Red ...	33	Devipatam ...	Red ...	3
Do. ...	White ...	15	Do. ...	White ...	1
Keelakarai ...	Red ...	64			
Do. ...	White ...	86		Total ...	276
Paumben ...	Red ...	10.			
Do. ...	White ...	4			

List of Boats and Divers engaged in Fishing.

No. of Boats with Red Flags.	From what Place.	Divers of what Place.	No of Divers.
1	Tuticorin	Tuticorin	30
2	Do.	do.	29
3	Do.	do.	29
4	Do.	do.	29
5	Do.	do.	30
6	Do.	do.	30
7	Do.	do.	29
8	Do.	do.	30
9	Colombo	Colombo	9
10	Tuticorin	Tuticorin	30
11	Do.	do.	29
12	Do.	do.	29
13	Do.	do.	29
14	Do.	do.	29
15	Jaffna	Jaffna	15
16	Colombo	Arabs	9
17	Tuticorin	Tuticorin	29
18	do.	do.	30
19	do.	do.	29
20	Keelakarai	Mariyur	16
21	Paumben	Paumben	15
22	Keelakarai	Keelakarai	13
23	Paumben	Paumben	16
24	Do.	do.	15
25	Do.	do.	15
26	Jaffna	Jaffna	10
27	Paumben	Paumben	15
28	Colombo	Arabs	9
29	Paumben	Paumben	15
30	Tondi	Tondi	18
31	Paumben	Paumben	15
32	Do.	Mandapam	15
33	Jaffna	Jaffna	10
34	Tuticorin	Tuticorin	29
35	Jaffna	Jaffna	10
36	Paumben	Paumben	14
37	Do.	do.	15
38	Keelakarai	Keelakarai	15
39	Do.	do.	15
40	Tuticorin	Tuticorin	29
41	Tondi	Tondi	17
42	Keelakarai	Vempar	13
43	Do.	do.	18
44	Do.	Keelakarai	12
45	Do.	do.	13
46	Do.	do.	13
47	Do.	do.	12
48	Do.	do.	12
49	Do.	Valinorkam	12
50	Do.	Keelakarai	16
51	Do.	do.	12
52	Do.	do.	12
53	Do.	do.	12
54	Do.	Mariyur	15
55	Jaffna	Jaffna	10
56	Keelakarai	Keelakarai	15
57	Do.	do.	12
58	Do.	do.	12
59	Do.	do.	12
60	Jaffna	Jaffna	10
61	Tondi	Tondi	17
62	Keelakarai	Keelakarai	12
63	Do.	do.	12
64	Do.	do.	12
65	Do.	do.	12
66	Do.	do.	12
67	Do.	do.	12
68	Do.	Naripur	12
69	Do.	do.	12
70	Do.	do.	12
71	Do.	Keelakara	12
72	Do.	do.	12
73	Do.	do.	12
74	Do.	do.	13
75	Do.	do.	12
76	Do.	do.	12
77	Do.	do.	12
78	Do.	do.	12
79	Do.	do.	12
80	Do.	do.	12
81	Do.	do.	12
82	Do.	do.	12
83	Do.	do.	12
84	Jaffna	Arabs	10
85	Keelakarai	Keelakarai	12
86	Do.	do.	12
87	Do.	do.	12
88	Do.	do.	12

No. of Boats with Red Flags.		From what Place.		Divers of what Place.		No. of Divers.
89	...	Keelakarai	...	Uppulam	...	12
90	...	Do.	...	do.	...	12
91	...	Do.	...	Keelakarai	...	12
92	...	Do.	...	do.	...	12
93	...	Jaffna	..	Arabs	...	10
94	...	Mannar	...	Irakkalampiddi	...	15
95	...	Jaffna	...	Jaffna	...	10
96	...	Do.	...	do.	...	10
97	...	Do.	...	do.	...	10
98	...	Do.	...	do.	...	10
99	...	Do.	...	do.	...	10
100	...	Do.	...	do.	...	10
101	...	Do.	...	do.	...	10
102	...	Keelakarai	...	Keelakarai	...	12
103	...	Jaffna	...	Jaffna	...	10
104	...	Keelakarai	...	Keelakarai	...	12
105	...	Jaffna	...	Irakkalampiddi	...	10
106	...	Do.	...	Jaffna	...	10
107	...	Do.	...	do.	...	10
108	...	Keelakarai	...	Keelakarai	...	12
109	...	Do.	...	do.	...	12
110	...	Do.	...	do.	...	12
111	...	Do.	...	do.	...	12
112	...	Do.	...	do.	...	12
113	...	Do.	...	Mukkur	...	12
114	...	Do.	...	Keelakarai	...	12
115	...	Do.	...	do.	...	12
116	...	Do.	...	do.	...	12
117	...	Tondi	...	Tondi	...	10
118	...	Devipatam	...	Devipatam	...	10
119	...	Do.	...	do.	...	15
120	...	Do.	...	do.	...	15
121	...	Jaffna	...	Irakkalampiddi	...	10
122	...	Do.	...	Jaffna	...	10
123	...	Do.	...	do.	...	10
124	...	Do.	...	do.	...	10
125	...	Do.	...	do.	...	10
126	...	Do.	...	do.	...	10
127	...	Do.	...	do.	...	10
128	...	Do.	...	do.	...	10
129	...	Do.	...	do.	...	10
130	...	Do.	...	do.	...	10
131	...	Do.	...	do.	...	10
132	...	Mannar	...	Irakkalampiddi	...	15
133	...	Jaffna	...	Jaffna	...	10
134	...	Do.	...	do.	...	10
135	...	Do.	...	do.	...	10
136	...	Colombo	...	Colombo	...	10
137	...	Keelakarai	...	Keelakarai	...	12
138	...	Do.	...	do.	...	12
Boats with White Flags						
1	...	Tuticorin	...	Tuticorin	...	30
2	...	Do.	...	do.	...	29
3	...	Do.	...	do.	...	29
4	...	Do.	...	do.	...	29
5	...	Do.	...	do.	...	30
6	...	Do.	...	Kailpatam	...	29
7	...	Jaffna	...	Jaffna	...	10
8	...	Tuticorin	...	Malayalam	...	29
9	...	Colombo	...	Colombo	...	12
10	...	Tuticorin	...	Tuticorin	...	29
11	...	Jaffna	...	Jaffna	...	10
12	...	Tuticorin	...	Tuticorin	...	29
13	...	Paumben	...	Paumben	...	15
14	...	Tuticorin	...	Tuticorin	...	29
15	...	Paumben	...	Paumben	...	15
16	...	Tuticorin	...	Tuticorin	...	29
17	...	Do.	...	do.	...	29
18	...	Jaffna	...	Jaffna	...	10
19	...	Tuticorin	...	Malayalam	...	29
20	...	Colombo	...	Colombo	...	12
21	...	Do.	...	do.	...	12
22	...	Paumben	...	Ramaswaram	...	29
23	...	Do.	...	do.	...	29
24	...	Keelakarai	...	Keelakarai	...	16
25	...	Do.	...	do.	...	12
26	...	Jaffna	...	Jaffna	...	10
27	...	Keelakarai	...	Keelakarai	...	13
28	...	Do.	...	do.	...	12
29	...	Do.	...	do.	...	12
30	...	Do.	...	do.	...	12
31	...	Do.	...	do.	...	12
32	...	Jaffna	...	Irakkalampiddi	...	10
33	...	Colombo	...	Colombo	...	12
34	...	Keelakarai	...	Keelakarai	...	12
35	...	Do.	...	do.	...	12
36	...	Do.	...	do.	...	12
37	...	Do.	...	do.	...	12
38	...	Do.	...	do.	...	12
39	...	Do.	...	do.	...	12

No. of Boats with White Flags.	From what Place.	Divers of what Place.	No. of Divers.
40	Jaffna	Jaffna	10
41	Keelakarai	Keelakarai	12
42	Do.	do.	12
43	Do.	do.	13
44	Jaffna	Jaffna	10
45	Keelakarai	Keelakarai	13
46	Do.	do.	13
47	Do.	do.	12
48	Do.	do.	12
49	Jaffna	Jaffna	10
50	Keelakarai	Keelakarai	12
51	Do.	do.	12
52	Do.	do.	15
53	Do.	do.	12
54	Jaffna	Jaffna	10
55	Keelakarai	Keelakarai	12
56	Do.	do.	12
57	Do.	do.	12
58	Do.	do.	12
59	Do.	do.	12
60	Do.	do.	12
61	Jaffna	Jaffna	10
62	Tondi	Tondi	17
63	Keelakarai	Keelakarai	13
64	Do.	do.	12
65	Do.	do.	16
66	Do.	do.	13
67	Do.	do.	12
68	Do.	do.	12
69	Do.	do.	12
70	Tuticorin	Tuticorin and Arabs	29
71	Keelakarai	Keelakarai	16
72	Do.	do.	13
73	Tuticorin	Tuticorin	29
74	Keelakarai	Keelakarai	12
75	Do.	do.	12
76	Do.	do.	14
77	Do.	do.	12
78	Do.	do.	12
79	Jaffna	Jaffna	10
80	Keelakarai	Keelakarai	12
81	Do.	do.	12
82	Tuticorin	Malayalam	29
83	Keelakarai	Keelakarai	12
84	Jaffna	Jaffna	10
85	Keelakarai	Keelakarai	14
86	Do.	do.	12
87	Do.	do.	12
88	Jaffna	Jaffna	10
89	Keelakarai	Keelakarai	12
90	Jaffna	Jaffna	10
91	Keelakarai	Keelakarai	12
92	Mannar	Irakkalampiddi	15
93	Do.	do.	15
94	Jaffna	Jaffna	10
95	Mannar	Irakkalampiddi	15
96	Do.	do.	15
97	Do.	do.	15
98	Do.	do.	15
99	Do.	do.	15
100	Do.	do.	15
101	Do.	do.	15
102	Keelakarai	Keelakarai	15
103	Do.	do.	12
104	Mannar	Irakkalampiddi	15
105	Keelakarai	Keelakarai	15
106	Do.	do.	12
107	Do.	do.	13
108	Do.	do.	12
109	Do.	do.	12
110	Do.	do.	12
111	Do.	do.	12
112	Do.	do.	12
113	Do.	do.	12
114	Do.	do.	12
115	Do.	do.	12
116	Devipatam	Devipatam	15
117	Keelakarai	Keelakarai	12
118	Do.	do.	12
119	Do.	do.	12
120	Do.	do.	12
121	Do.	do.	12
122	Do.	do.	12
123	Do.	do.	12
124	Do.	do.	12
125	Do.	do.	12
126	Do.	do.	12
127	Colombo	Colombo	12
128	Keelakarai	Keelakarai	12
129	Do.	do.	12

No. of Boats with White Flags.	From what Place.	Divers of what Place.	No. of Divers.
130 ...	Keelakarai ...	Keelakarai ...	12
131 ...	Do. ...	do. ...	12
132 ...	Do. ...	do. ...	12
133 ...	Do. ...	do. ...	12
134 ...	Do. ...	do. ...	12
135 ...	Do. ...	do. ...	12
136 ...	Do. ...	do. ...	12
137 ...	Do. ...	do. ...	12
138 ...	Do. ...	do. ...	12
		Total ...	3,992

Statement of Sale of Sample Pearls, &c., sold at Marichchikkaddi on April 11, 1903.

No. of Lot.	Particulars.	Estimated Value. Rs. c.	Amount of Sale. Rs. c.
1 ...	Sample pearls of November, 1902, Periya Paar Karrai	26 50 ...	Sold in one lot.
2 ...	Do. do. South-East Cheval	123 0 ...	
3 ...	Do. do. East Cheval ...	18 18 ...	
4 ...	Do. do. North-East Cheval	46 25 ...	
5 ...	Sample pearls of February, 1903, East Cheval ...	121 54 ...	
6 ...	Do. do. South-East Cheval	290 0 ...	
7 ...	Do. do. North-East Cheval	99 89 ...	
8 ...	Do. do. Periya Paar Karrai	66 73 ...	
9 ...	Pearls washed by Mr. Dixon No.1	23 60 ...	
10 ...	Do. No. 2 ...	354 21 ...	
11 ...	Do. No. 3	105 0 ...	
12 ...	Confiscated pearl, No. 1	235 61 ...	
13 ...	Do. No. 2	150 0 ...	
		1,660 51	2,700 0

The result of the Fishery was as follows, viz. :—

Banks fished.	Number of Fishing Days.	Oysters fished. Government Share.	Oysters fished. Divers' Share.	Oysters fished. Total.	Average Prices at which the Oysters were sold per 1,000.	Price per 1,000 of Samples of November, 1902.	Price per 1,000 of Samples of February, 1903.	Total Proceeds of Oysters (Government Share).
					Rs. c. Rs. c.	Rs. c.	Rs. c.	Rs. c.
North-East Cheval	10	7,575,540	3,787,770	11,363,310	25 91 to 19 77 22 31 to 23 36 25 10 to 33 38 29 56 to 29 95 35 16 to 41 0	23 12½	24 97	198,932 86
Periya Paar Karrai	2	936,265	468,132	1,404,397	35 86 to 34 54	13 25	22 24	32,861 10
East Cheval ...	14	11,215,245	5,607,623	16,822,868	35 73 to 40 85 41 22 to 37 48 36 32 to 35 98 38 35 to 33 68 30 40 to 30 64 28 6 to 33 45 42 23 to 10 0	18 17¼	20 26	389,125 23
North-East and East Cheval	1	138,000	69,000	207,000	28 30	—	—	3,903 0
South-East Cheval	7	6,303,555	3,151,777	9,455,332	22 52 to 26 9 29 22 to 24 13 23 50 to 23 47 29 54	10 25	19 33	153,363 3
East and South-East Cheval	4	1,277,820	638,910	1,916,730	22 17 to 50 0 27 66 to 29 79	—	—	38,290 53
Total ...	38	27,446,425	13,723,212	41,169,637				816,475 75
Deduct for oysters bought by Mr. Dixon on Government account								984 30
								815,491 45
Rent of boutique sites								4,334 0
Commission on Indian notes								1,445 14
Proceed sale of sample pearls of November, 1902, and February, 1903								2,700 0
Proceed sale of pearls washed by Mr. Dixon on Government account								
Proceed sale of confiscated pearls								
Proceed sale of confiscated articles and confiscated money								17 17
Fines on boatmen, tindals of diving boats, and counters								628 0
Proceed sale of Government kottu sweepings								45 0
Proceed sale of hospital equipments								467 50
Value of right to sell arrack at Pearl Fishery								2,000 0
								827,128 26

Statement of Oysters exported during the Pearl Fishery of 1903.

Places to which exported.	Number of Oysters.	Places to which exported.	Number of Oysters.
Tondi	7,000	Beruwala	37,000
Keelakarai	500,000	Puttalam	3,000
Kayalpatam	7,000	Kalpitiya	81,950
Tuticorin	160,000	Mannar	28,500
Paumben	400,000	Jaffna	82,925
Colombo	3,000,050	Kankesanturai ...	800
Negombo	127,000		
Galle	41,500	Total ...	4,530,725
Chilaw	5,000		
Panadure	49,000		

Port of Puttalam.

Statement of Customs Revenue collected at the Port of Puttalam from February 10 to April 22, 1903.

Imports.

	Rs. c.		Rs. c.
Grain	812 80	Fines and forfeitures ...	2 50
Cotton manufacture ...	111 69	Port dues	281 40
Sugar	29 96		
Other goods ...	240 90	Total ...	1,534 62
Warehouse rent (single) ...	54 73		
Warehouse rent (double) ...	0 64		

Note A.

In reply to an inquiry from me about statistics, Sir William Twynam writes, May 10, 1903 :—

"....There is no return that I know of giving the number of days' fishing at the end of the fishery, together with the quantity of oysters brought up and the amounts realized.

In my reports I always gave the number of days on which fishing was carried on, and in 1881 I qualified the statement by pointing out that on some of the days only a few boats went out. From 1877 I made a detailed statement. Any return merely giving "so many days' fishing" would be misleading.

In your estimate I think you give 200 boats with full complement of divers for so many days. A full complement of divers was always supposed to be ten to a boat. But all this is now changed, and some boats take out twenty or more. [The big Tuticorin boats used to have fifty or sixty men in all on board.—R. W. I.] Again, as a fishery goes on many of the divers do not go out every day. I have met divers in the bazaar when the boats were out on the banks, and they said they were "taking a rest."

Towards the close many boats go out with only four or five divers.

From what I could gather in the telegrams in the papers, many boats went out towards the close without their full complement of divers. [True.—R. W. I.]

The only way to come to any true idea of the "day's fishing," as compared with the nominal number, is to daily count the divers before they leave the kottu. 1,500 divers is the largest number I have known at a fishery, and this would only be sufficient for 150 boats, giving each boat ten.

There has never been sufficient for 200 boats, giving each boat ten divers.

I think Ferguson is right in the number of days as given by him, taken no doubt from printed reports.

Your estimated number of oysters was 200,000 a day, as the work of a boat was always supposed to be 10,000 with full complement of divers, but some boats bring more, some less. [The big Tuticorin boats with thirty divers have changed all these average estimates.—R. W. I.]

You will find in my reports from 1863 full particulars as to revenue, number of days' fishing, number of divers, boats, &c.

Stuart, in his account of the fisheries, has the revenue from each fishery up to 1837. He does not give the number of days' fishing. Ferguson in his Directory has the revenue during the British occupation, and indicated that he got the information from a report made by order of Sir Henry Ward."

No. 2.

The INSPECTOR OF PEARL BANKS to the Hon. the COLONIAL SECRETARY.

No. 104. Master Attendant's Office, Colombo, June 8, 1903.

SIR,—I HAVE the honour to inform you that I left Colombo in the barque "Rengasamy Puravy" in tow of the steam tug "Active" at 11 P.M. on 28th January for Marichchikaddi, at which place I expected to pick up the Government divers and manduks.

2. At 4.30 P.M. on the 30th January I arrived and anchored off Marichchikaddi.

On the 1st February at 2 P.M. I got under weigh with the whole pearl fishery inspection staff on board and, towed out by the C.G.S. "Serendib," proceeded to the Cheval Paar; the east side of this bank I inspected and lifted samples prior to marking the separate beds for fishing.

The results of my inspection, which occupied me, owing to adverse weather, until 16th February, were as follows :—

Paar.	Acreage.	Estimated Number of Oysters.	Sample lifted.	Valuation per 1,000. Rs. c.
South-East Cheval Paar	... 488	25,237,000	15,000	19 87
East Cheval Paar ...	... 712	30,216,000	6,000	20 37
North-East Cheval Paar	... 481	16,829,000	4,000	25 37
Periya Paar Karrai...	... 191	6,967,000	3,000	21 60
Total	... 1,872	79,250,000		21 80 (average)

3. On the afternoon of the 16th February I returned to Marichchikaddi, and the following morning landed the samples preparatory to washing them. This operation lasted until the 24th February, on which day the last of the samples was picked over and valued, with the results as shown in the preceding table.

4. At 11.30 on 24th February I again got under weigh for the banks and anchored on the North-East Cheval Paar, the bed which I had previously arranged with the Superintendent of Pearl Fisheries, Mr. Ievers, to mark and fish first. I marked the southern half of this bed with some twenty bamboo buoys having flags attached to them on the 25th, and remained on this spot until the fishery commenced on the 3rd March.

5. At daylight on the 3rd March I discovered and counted 97 boats at anchor around me ; I made the signal to commence diving at 6.30. The divers displayed great keenness and did good work ; I hauled down the signal for diving at 1 P.M.

The fishing of the southern and northern half of this bed continued until 14th March. On the 15th, as the loads of oysters showed a falling off in quantity, I moved to the Periya Paar Karrai. This bed, I regret to say, was unsatisfactory, owing to the greater depth of water, which was 9 fathoms, as compared with 6 fathoms on the Cheval Paar, and actually caused the collapse of five divers, two of whom died ; I am also of opinion that some fish had preyed very largely on these oysters, as on descending myself in a diving dress I observed that the oysters had the appearance of having been crushed, though there appeared to be plenty remaining. The boats also on the 16th unaccountably missed the mark vessel, though I burned a signal light visible from 6 to 10 miles away every night, and all night, leaving no excuse for the steersmen in the divers' boats for not having seen it.

6. I judged it advisable to abandon this bed on the 17th, and proceeded to the East Cheval bed, the northern half of which I buoyed in the same manner as before.

The northern and southern halves of this bed were fished until the 2nd April, by which time and for some days previously I noticed a very marked falling off in the zeal with which the divers worked, the boats arriving late and leaving early and the men diving in a leisurely manner.

I marked the south-east bed on the afternoon of the 2nd April, which bed was fished until the 14th ; from the 9th, however, the boats spread out over the east and south-east beds, but did not work with sufficient energy to get good loads.

7. On the 15th, before daybreak, I moved to the south extreme of the north-east bed again, but the boats, of which there were only 60, practically refused to work, making this the thirty-eighth and last day's fishing.

8. As I had a unique opportunity for inspecting the banks fished immediately on the closing of the fishery (a thing, I believe, there has never been an opportunity to accomplish before), and as I also was of opinion that numerous oysters were left, in contradiction of the divers' statements that there were none, I decided to make an inspection at once whilst the fine weather lasted ; this occupied me until the 21st April, with the following results :—

Paar.	Area. Acres.	Estimated Number of Oysters left.
South-East Cheval Paar	174	5,067,000
East Cheval Paar	322	12,908,000
North-East Cheval Paar	201	3,930,000
Total ...		21,905,000

9. The number of oysters recorded landed are noted below, from which deduct 1,473,297, which were lifted from the Periya Paar Karrai ; adding to this total the above inspection result gives a discrepancy from my February estimate of 9,682,660 oysters, which I am of opinion represents the number of oysters surreptitiously opened by the divers during their passage from the fishery ground to the camp :—

Oysters landed	41,169,637
Periya Paar Karrai	1,473,297
	39,696,340
Oysters remaining	21,905,000
Total	62,601,340
February estimate	72,283,000
Discrepancy	9,682,660

10. The closure of the fishery before all the oysters were lifted was, I believe, due to the following combination of circumstances :—

(1) The divers had made as much money as they wanted from their so-called third share, and did not desire to go on.
(2) That they could not for physical reasons go on, especially as this fishery was a longer one than usual.
(3) That the season was an unhealthy one in the northern part of the Island, where very cold nights and very hot days were experienced ; this and their neglect of ordinary personal precautions told on the general health of the divers.

11. I had a European diver with his accessories with me for thirty-eight days. This I found of great value, as I was able personally to inspect the beds and verify or contradict the native divers' statements ; I also was able to ascertain the practicability of dredging over the bottoms of the various paars.

The paars thus inspected by your instructions were the East and West Cheval, the Periya Paar Karrai, the Arrippu, Periya, Vaukali, Karaitivu, Alantura, and Muttuwaratu Paars ; of these, I inspected the East and West Cheval and Periya Paar Karrai personally, and I despatched Mr. James Hornell, Government Biologist, to inspect the remainder ; of the whole of these, the Karaitivu and one small portion of the Muttuwaratu Paar only offer serious obstacles to dredging.

12. In conclusion, I have to report that I returned to Marichchikaddi on the 21st after completing my final inspection and cutting all the bamboo marks adrift, and spent until the 23rd, taking on board Mr. G. G. Dixon's baggage, &c., and a shroff from the fishery camp Kachcheri, with a box said to contain a sum exceeding two lacs of rupees. At 10.30 A.M. on the 23rd April I left Marichchikaddi in tow of the steam tug "Active" for Colombo. After towing until noon on 25th, and making very poor progress against the south-west wind and northerly current, I let go the tug, which that evening reported a bad leak; so I despatched her immediately to Colombo and proceeded to beat under sail, but on Monday, the 27th, finding I was making no better progress, and having only one day's drinking water left on board (as on leaving Marichchikaddi I had estimated to arrive in Colombo in forty-eight hours, and having then water for five days I considered I had ample), I had no alternative but to turn back and run for Dutch Bay, the nearest place drinking water was procurable, where I arrived that evening.

13. As Mr. Dixon's arrival in Colombo was urgent, and as Mr. Hornell informed me his return to Galle was of the utmost importance, I decided to secure a padda boat to take their baggage and specimens, &c., by canal to Colombo, and leave the barque "Rengasamy Puravy" to make the best of her way back to Colombo after filling up with drinking water and ballast. This I did, and arrived at Colombo at 6 A.M. on 4th May.

I am, &c.,

JOHN A. LEGGE,
Inspector of Pearl Banks.

No. 3.

The PRINCIPAL CIVIL MEDICAL OFFICER AND INSPECTOR-GENERAL OF HOSPITALS to the Hon. the COLONIAL SECRETARY.

No. 752. Civil Medical Department, Ceylon, Colombo, May 13, 1903.

SIR,—I HAVE the honour to forward a copy of the report on the pearl fishery at Marichchikaddi by Dr. F. G. Spittel, Acting Colonial Surgeon, Northern Province.

I am, &c.,

ALLAN PERRY,
Principal Civil Medical Officer and Inspector-General of Hospitals.

Enclosure in No. 3.

The ACTING COLONIAL SURGEON, Northern Province, to the PRINCIPAL CIVIL MEDICAL OFFICER AND INSPECTOR-GENERAL OF HOSPITALS, Colombo.

No. 69, P.C.M.O. Jaffna, May 3, 1903.

SIR,—I HAVE the honour to submit my report on the pearl fishery of the current year, which took place at Marichchikaddi. I was in charge of the medical duties of the camp from the 8th February till 21st April.

The medical staff of the camp consisted of the following officers, who worked under my supervision :—

(1) Dr. C. Somasunderam was in charge of the general hospital and outdoor dispensary.
(2) Dr. R. Santiago acted as health officer, and inspected all the vessels arriving at the port.
(3) Apothecary Muniyah was in charge of the infectious diseases hospitals, and inspected the divers' quarters and bazaars daily in order to detect the concealment of sickness.
(4) Apothecary Arulampalam was the apothecary of the general hospital, and was in charge of the stores, hospital equipments, disinfection, &c.
(5) Mr. Assirvatham acted as apothecary of the outdoor dispensary.
(6) Mr. R. Vallipuram was in charge of the quarantine camp at Tálladi.

Water Supply.—Water for drinking and cooking was obtained from a large tank situated at the eastern limit of the camp. At the commencement of the fishery this tank was quite full, and when it ended it still contained sufficient water to last for another month or longer, even if there was no rain to replenish it. As the quality of the water was not found to be quite satisfactory by the Government Analyst, Henkin's method was adopted to improve it. I may, however, mention that I am inclined to think that the water of the Marichchikaddi tank is in a higher state of purity and freedom from pollution than the water of most of the tanks of the Mannar District. In order to prevent the pollution of the water the tank was fenced all round, and guards were placed to watch it. The water was lifted into two large cisterns, which were always kept full, and men provided with buckets were continually at work in serving out water to those who came for it. Water for drinking was also procurable from a well situated about a mile away from the camp close to the Marichchikaddi resthouse.

The sanitary condition of the camp from the commencement of the fishery till its termination was most satisfactory. For the conservancy of the camp 110 scavenging coolies with 16 overseers worked under the supervision of Mr. Nicholas, the Sanitary Inspector. Besides these, 12 coolies and 2 overseers were employed for keeping the camp clean under the supervision of Apothecary Muniyah.

Health of the Camp.—Malarial fever, which usually prevails in most villages of the Northern Province from November till March, prevailed in the camp. From the 14th February, when the fishery camp dispensary was opened, till the 19th April, when it was closed, 3,722 cases of fever were admitted. All types of the disease occurred. The quotidian and the tertian types were the commonest; there were some cases of the quartan type, mixed infection and remittent fever, and only a very small number of pernicious attacks. The disease was in some cases complicated with bronchitis and bowel complaint. The most serious complication, pneumonia, occurred in only a very small number of cases.

More than three-fourths of the number of cases were of a very mild nature, and readily yielded to treatment. The mortality from the disease was very small. In the whole camp, including those that died in the hospital, there were only 23 deaths from malarial fever, showing a mortality of 61 per cent. per 1,000 of the population, taking the population at 40,000.

Taking into consideration that Marichchikaddi is a very malarious locality, that the fishery took place at a time when the disease is usually most prevalent, and that there were in the camp about 40,000 people, I am not inclined to say that the disease prevailed to any great extent. At the outdoor dispensary, Jaffna, and at the outdoor dispensary attached to the Friend-in-Need Society's Hospital, Jaffna, during the same period 1,978 cases of malarial fever were treated, showing that the disease was not much more prevalent at the fishery camp than it was in the town of Jaffna and its vicinity.

Dysentery also prevailed to some extent, but most of the cases were of a very mild type. There were 215 admissions for this disease, both at the outdoor dispensary and in the hospital; of these, 4 died outside the hospital and 5 in the hospital, showing a death-rate of 4·18 per cent. of the cases admitted. The disease was chiefly due to exposure to sudden variations of temperature, irregular living, unsuitable food, and insufficient clothing.

But for the prevalence of the above diseases, the health of the camp was most satisfactory. The camp was quite free from cholera, acute diarrhœa, smallpox, chickenpox, mumps, and measles, and although a large number of people came frome plague-infected areas of India, the disease was not introduced into the camp.

HOSPITALS.

The general hospital consisted of two wards, a male ward with accommodation for 16 and a female ward with accommodation for 8 patients. In connection with this hospital there were two latrines, a storeroom, a kitchen, a servants' room, and a dead-house.

Food of Patients.—Cooked food was supplied by a contractor, and the scale of diets was the same as in other hospitals. The food was cooked in the kitchen attached to the hospital; it was inspected daily, and was always found to be satisfactory both as regards quality and quantity. Water for all purposes was obtained from the Marichchikaddi tank. The drinking water was always boiled and filtered. The filters used were Lipscombe's patent filters.

Equipment.—The hospital was provided with an ample supply of equipment of very good quality from the Colonial Stores. At the close of the fishery the used linen was destroyed, and the unused was returned to the Colonial Stores. The non-perishable articles were given in charge of the storekeeper at Marichchikaddi. From the 15th February, the day on which the hospital was opened, till the day it was closed, on the 20th April, there were 185 admissions into hospital, males 181 and females 4. The average daily sick was 12·87. Of the total number treated in hospital, 22 proved fatal, showing a mortality of 11·35 per cent. Most of the patients who died were brought to the hospital when in a moribund condition. The prevailing diseases were malarial fever, of which there were 100, and dysentery, for which there were 29 admissions.

Besides the general hospital, there were two infectious diseases hospitals with all the necessary outhouses, one for cholera and the other for smallpox, each having accommodation for 24 patients. These hospitals were provided with a sufficient quantity of hospital supplies, drugs, equipment, &c., to enable me to deal with outbreaks of any severity of either of these diseases. I was also well provided with medicines, disinfectants, equipment, &c., to be used in the event of an outbreak of plague.

A segregation camp with hospitals attached was kept ready at Talladi, two miles from Mannar, in order to guard against the contingency of dissemination of plague or cholera by visitors to the fishery, or in the event of an outbreak in the fishery camp.

The outdoor dispensary, which was opened on the 14th February and closed on 19th April, was well provided with drugs, appliances, and surgical instruments. The number of patients treated during the above period was 4,550. The prevailing diseases were malarial fever and dysentery. More than three-fourths of the number of cases of both these diseases were of a very mild type and readily yielded to treatment.

Statements showing the number of patients and the diseases for which they were admitted to the general hospital and outdoor dispensary are hereto annexed.

I am, &c.,

F. G. SPITTEL,
Acting Colonial Surgeon, Northern Province.

Statement showing the Number of Cases treated in the General Hospital at the Pearl Fishery Camp, Marichchikaddi, from February 15 to April 20, 1903.

Diseases.	Admitted.	Discharged.	Died.	Remaining.
Dysentery ...	29	24	5	—
Malarial fever, intermittent ...	91	90	1	—
Malarial fever, remittent ...	9	4	5	—
Malarial cachexia ...	3	2	1	—
Syphilis, primary ...	1	1	—	—
Gonorrhœa ...	1	1	—	—
Debility ...	1	1	—	—
Rheumatism ...	2	2	—	—
Conjunctivitis, simple ...	1	1	—	—
Bronchitis ...	2	2	—	—
Asthma, spasmodic ...	1	1	—	—
Pneumonia lob (Catarrh) ...	14	8	6	—
Pleurisy ...	1	1	—	—
Diarrhœa ...	15	13	2	—
Jaundice ...	2	1	1	—
Inflammation of lymph vessels ...	1	1	—	—
Stricture of urethra ...	1	1	—	—
Abscess ...	2	1	1	—
Ulcer	3	3	—	—
Ganja poison ...	1	1	—	—
Wound, contused ...	4	4	—	—
Total ...	185	163	22	—

Return of Diseases treated at the Outdoor Dispensary at the Pearl Fishery Camp, Marichchikaddi, from February 14 to April, 19, 1903.

I.—General Diseases.

Group A.	
Dysentery	186
Enteric fever	—
Malarious fever ...	3,722
Malarial cachexia	11
Primary syphilis	3
Secondary syphilis	2
Congenital syphilis	—
Gonorrhœa	7
Hydrophobia (rabies)	—
Group B.	
Worms	17
Dochmius duodenalis (Anchylostomum) ...	—
Alcoholism	—
Group C.	
Debility	13
Group D.	
Rheumatic affections	40
Tubercular affections	—
Leprosy	—
Parangi	2
Diabetes	—
Anæmia (cause unknown) ...	1
All other general diseases	2

II.—Local Diseases.

Diseases of the nervous system ...	13
eye	19
ear	58
nose	—
circulatory system ...	—
respiratory system ...	76
Diarrhœa	33
Diseases of liver	16
Other diseases of digestive system ...	158
Goitre	—
Diseases of spleen	4
lymphatic system	2
urinary system	—
generative system ...	1
organs of locomotion ...	—
connective tissue ...	10
skin	29
Ulcers	28
Poisons	—
General Injuries	1
Local Injuries	96
Total number of outdoor patients treated at dispensary ...	4,550
Operations—	—
Major	—
Minor	10
Total ...	10

No. 4.

The Government Agent, Northern Province, to the Hon. the Colonial Secretary.

No. 165. Jaffna Kachcheri, May 23, 1903.

Sir,—I have the honour to transmit Mr. Denham's report on the fishery, asked for by the Lieutenant-Governor's telegram of 27th April last.

I am, &c.,
R. W. IEVERS,
Government Agent, Northern Province.

Enclosure in No. 4.

Supplementary Report on the Pearl Fishery of 1903.

My work at the fishery was that of Assistant to the Superintendent and of Police Magistrate. During the illness of Mr. Horsburgh I acted for him as Kottu Superintendent in addition to my own duties.

Court Work.—The court work was light. The behaviour of the people throughout the fishery was excellent. A summary of the cases tried by me as Magistrate will prove this :—

	Cases.
Rape	1
Nuisance	366
Drunk and disorderly	6
Theft	10

Nuisance Cases.—The large number of nuisance cases was a necessary precaution to prevent the camp getting into an insanitary condition. In every case the accused pleaded guilty, and was sentenced to a small fine, or, in the case of small boys, to four or five cuts with a cane. A small party of police, under the charge of a sergeant, was detailed for the duty of supervising the scavenging parties, and the majority of cases were instituted by them for offences committed in the divers' quarters, a part of the camp which it was always most difficult to keep clean.

Other cases were instituted against persons fouling the water of the tanks. Every tank was in charge of a special watcher and constable, whose duty it was to see that the tank was used only for bathing, and that no water was taken from it for cooking purposes, except in the case of Adappenkulam, where drinking water only could be procured.

Drunkenness.—The number of drunk and disorderly cases is extraordinarily small when it is realized that for a considerable time there must have been at least 40,000 persons in camp, while the camp population could never have fallen below 10,000. A "black list" was kept of persons convicted, and posted at the court. I can only ascribe the freedom from drunkenness to the fact that the people at the camp were always either busy or amused. The arrack renter undoubtedly made a very handsome profit, and the taverns did a good trade. The divers, who were among their chief

supporters, only drank in the evening, while the rest of the population were always busy in opening oysters, bargaining for or selling pearls. The only row which occurred directly on account of drink was at the commencement of the camp, before fishing had started.

Illicit Sale of Arrack.—An illicit sale of arrack was carried on for some weeks at Pukulam, a small fishing hamlet on the opposite side of the river, and was largely patronized by the fishermen. This sale was seized by the police. I sent two constables in plain clothes out in a fishing boat, and they landed at this spot and were supplied with arrack. On their arresting the retailer resistance was offered, backed by the headman of the village, who undoubtedly had derived a considerable profit by his connivance; there might have been a serious row had it not been for the arrival of police assistance. A seizure was made of several bottles of arrack and of drinking "chits" or bills, which showed the extent of the trade. The retailer was tried and sentenced to the maximum penalty, a fine of Rs. 50. The headman and some other persons who had resisted the police were put on their trial. The headman and five others were convicted and fined.

Gambling.—There were no cases of gambling, which is perhaps not so surprising, considering the opportunities afforded for speculation in purchase of oysters.

"*Bolters.*"—The popularity of the fishery was evinced at its commencement by the receipt of a number of warrants issued for the arrest of servants, who had bolted from their masters "to go to the fishery." In all cases where the servants were found they returned to their work.

Butchers.—A case which considerably affected the comfort of many, particularly the European community, was one of theft by a butcher. Two licenses for butchers were issued, one to a Mannar Tamil, the other to a Galle Moorman. The latter, finding that competition did not pay, suggested a combine, which the Mannar man agreed to. All went happily until the latter was laid up with fever, and, like many of his class, went to lie in the church for a few days, with the hope of obtaining a cure. Profiting by his absence, the Galle butcher, went off by steamer with the knives and stock-in-trade of the other butcher, who on his return found himself minus funds, implements, and partner; and the camp was left without a butcher. The runaway was arrested, brought back, and restitution was made.

Theft.—The number of cases of theft was very small, especially considering the amount of money in camp. It was no uncommon thing for large cases of specie to be brought up by the steamers, while the merchants from India brought over small chests and safes with them, In only one case was it alleged that a large sum of money had been taken; there was, however, no evidence.

A Case of Rape.—The only serious case of crime was one of rape committed by a Tuticorin diver, at the commencement of the fishery, on a small girl, one of his own people. The accused admitted the charge, and was committed to take his trial at the Supreme Court Sessions in Colombo.

The Police; their Duties.—The fact that there were so few serious cases was due to the general behaviour of the people, and also to the good conduct of the police.

The police force consisted of 90 men from Colombo and 20 men from Jaffna, with 10 sergeants, under the charge of Inspector Ludovici. The force was at no time too large for the camp requirements, and at times, owing to sickness amongst the men, was insufficient. The work of the force was so varied, and covered so much of the camp, that continual inspection and supervision were required. Besides the beats, which were arranged throughout the camp, the police were also on duty as guards at the kottu, where they did excellent service in detecting concealment of pearls by the divers, who were searched by them as they passed out from the kottu. Considerable ingenuity was shown by many of these constables in the detection of the hiding-places selected, pearls being found concealed in the mouth of a fish, which a diver was carrying out with him, and in the lining of a charm worn round the neck. Police in plain clothes also searched the divers' boats daily, after their loads had been removed to the kottu. They also went on night duty at the kottu. They acted as supervisors of the scavenging parties, protected the water tanks from pollution, and were on guard at the sale bungalow, Treasury, court, and other Government buildings.

Their Quarters.—The quarters provided for them were in every way sufficient. There were two stations in addition to the main one, one on the hill above the kottu and the other in Main street; the latter was, however, unnecessary, and need not be rebuilt at the next fishery.

Lock-up.—The lock-ups would not be sufficient if a large number of prisoners had to be dealt with, and in any case should be more substantial and durable erections.

Health of the Police.—There were no deaths amongst the police, but a large number had to be invalided down to Colombo.

The prevailing sickness was fever. On 25th March there were 23 constables sick; on 7th April, 38.

Their Behaviour.—There was only one case in which the police were convicted of interfering with any villagers, and this occurred on the last day but one of the fishery, when two constables assaulted a villager of Mullikulam who had refused to give them ganja. The constables have since been dismissed.

Bad Characters.—The number of bad characters in camp, both from Ceylon and India, was very large. Before the fishery commenced the Inspector-General was asked to direct the heads of police in each district to communicate with me direct if any habitual criminal was known to have gone to the fishery, sending me his descriptive roll. As soon as information was received the man was brought up before me, and had to report himself weekly. All habituals were warned that they would be at once deported from the camp if they gave any trouble, and I believe this system had effect, as no habitual appeared before me on any charge. Considering the facility that existed, when persons who were known to have chests of rupees with them were often prostrate with sickness or busy at all times of the day with the rotting and washing of the oysters, and engaged from 9 to sometimes 11 o'clock at night at the sale bungalow, it is certainly remarkable that no burglaries and so few thefts should have been committed.

Camp Inspection; Sanitary Conditions.—The supervision of the police rounds necessitated constant inspection of the camp. Its sanitary condition was from the first good. The scavengers did their work well, especially in the divers' quarters, which always needed the most thorough cleansing and the burning of disinfectants, owing to the filthy state in which the Keelakarai and Tuticorin people kept their huts. The efforts of the scavengers were aided by the strong sun, which dried up the soil remarkably quickly.

The Streets.—The plan of the streets was satisfactory; the business of the camp was concentrated and traffic easily regulated.

Their Arrangement.—It would, however, be better at another fishery to allot separate streets to the pearl merchants and to the general traders.

Changes from previous Fisheries.—The merchants, who had been present at previous fisheries, applied this year for boutiques in Old Moor street, which had been Pearl Bazaar, but found on their arrival that the fashionable quarter had changed. The reason of this was that many of the big merchants who did not apply early were too late to secure shops in Old and New Moor streets, and consequently were given sites in Main street. Most of the Main street sites had, however, been allotted to the petty traders; consequently many of these were bought out for large sums by those pearl merchants who found themselves cut off in the side streets from their chief competitors. The cloth merchants were also scattered in Chetty street and Main street. The tendency was thus to crowd all the business of the camp in the Main street, which at one time was inconveniently crowded. Difficulty was also experienced in providing accommodation for the late arrivals, some of whom were wealthy Bombay merchants and large purchasers of oysters and pearls. This difficulty might in future be removed by confining the cloth merchants to Chetty street; provided that all merchants retailing the same goods have similar quarters, there can be no grounds for discontent.

The number of pearl merchants has evidently so greatly increased since previous fisheries that Old Moor street would no longer afford them sufficient accommodation, and the frontage of Main street should be reserved for them, while the small traders could find accommodation in Old and New Moor streets, Tank, and Divers' streets. If deemed advisable, the rental of the sites in Main street might be raised; this year a rental of Rs. 10 was charged. On account of the large number of applicants who subsequently applied for lots, three extra sites were put up for auction, and the rental of the best situated of these was sold for Rs. 80.

Indian Notes.—In addition to the trouble of procuring suitable accommodation the merchants at first experienced great difficulty in procuring change for their Indian notes which they had brought over with them, though they had been warned by Government notification that all payments should be made in Ceylon currency. This difficulty was removed by the notes being changed at the Kachcheri on payment of a commission of ½ per cent. in cases where oysters had been purchased and 1 per cent. on ordinary exchange.

At the close of the fishery the tide set in the opposite direction, and the anomalous state of affairs prevailed of commission being charged by the Indian merchants on any Ceylon notes changed by them.

During the last few days there was a continuous demand for Indian notes in exchange for Ceylon at the Kachcheri, and by 17th April all the Indian notes available were taken. Large remittances of notes had, however, in the meantime been sent to Colombo.

Rs. 264,695	in Indian notes	were received.
Rs. 253,735	do.	were remitted to Colombo.
Rs. 10,960	do.	were issued to Indian merchants at the camp in exchange for Ceylon notes.

Sovereigns.—The returning Indian merchants, who had Ceylon notes to dispose of, then asked that change should be given them in sovereigns, and between 15th and 17th April Rs. 38,317·50 in gold (or 2,554½ sovereigns) were exchanged for Ceylon notes.

If the traders still persist in bringing Indian notes with them and not availing themselves of bank credits, it will be as well to note this ebb and flow in the demand, and in future retain the Indian notes for exchange at the close of the fishery instead of remitting them to Colombo, where commission has to be paid by Government to the bank for changing them.

Payments in Cash.—One of the most noticeable features of the 1903 fishery was the great increase in the work of the Shroff's Department. The number of credits opened was very small considering the very large amount of money which changed hands in camp, while some of the largest deposits were made, not for the purchase of oysters, but to be drawn out by pearl merchants for the purchase of pearls.

The merchants, as I have before had occasion to remark, brought over large sums in cash with them, and preferred to make payments to the shroff for each separate purchase of oysters. The consequence of this was that the Shroff's Department daily received large sums of money in notes and cash; thus on 22nd March Rs. 43,174 were lodged in the vault, being cash takings of the day, less payments, while the average daily receipts in cash during the fishery was between Rs. 20,000 and Rs. 30,000.

Every facility was given for the opening of book credits; deposits could be made by intending purchasers of oysters at the Treasury in Colombo or at the District Kachcheries, while bank bills and bank credits were also received.

Due to Number of Purchasers.—The probable explanation of the preference given to payments in cash is that the number of purchasers this year was very great, and consequently the number of lots of oysters sold was far in advance of previous years, as was also the number of small operators who brought money with them.

Classes of Purchasers.—It was these small speculators who kept up prices and prevented the formation of a ring. During the first few days of the fishery prices were kept down by the large merchants, who then had control of the market, but the export trade in oysters, chiefly run by Sinhalese of Negombo and Chilaw, upset their calculations. This "goiya" class of purchasers was succeeded by a large number of Indian speculators, late arrivals, probably attracted by the large profits made by the early investors, and also buying for firms of jewellers, who feared that their business might suffer if they were not able to meet the demand for pearls which the fishery no doubt created both in India and Ceylon. The latter supposition is borne out both by the high prices paid

for oysters, as well as by the fact that pearls could be purchased during the closing days of the fishery only at most exorbitant rates, the merchants evidently wishing to lay in a stock for the Indian market.

Fluctuations in Price.—The fluctuations in the price of oysters were very marked, and can scarcely be said to have at any time represented the true value of the oysters, the highest prices being paid for the South-East Cheval, which were admittedly inferior in pearls to the North-East Cheval, which were sold at the commencement.

Number of Speculators points to local Prosperity.—It was amply proved that the good prices obtained were due to the large number of purchasers in the market, and that, instead of the day's fishing of oysters being taken by a dozen Chetties, they were generally distributed between more than a hundred purchasers. This fact, while it tended to the success of the fishery, is also evidence of the present prosperity of Ceylon. The majority of the small speculators were natives of the Island. In 1891 there was only one Sinhalese purchaser of a few thousand oysters; this year Sinhalese came from all parts of the Island; there were purchasers from Galle, Kurunegala, Matara, Hambantota, Negombo, Chilaw, and even from villages as Ragama.

The export trade in oysters, which were taken to Colombo, Gallé, and Puttalam, was principally in the hands of the Sinhalese, and as 4,530,725 oysters were exported this trade must have been very profitable.

The Moormen of Mannar and Puttalam also derived considerable profits from the fishery; the majority of the food stuff shops were opened by them, while others derived considerable profit by the sale of cadjans. The whole fisher population along the coast also found a large market for their takings, and though there was always plenty of fish in the market, prices kept high.

Benefits of the Fishery.—The benefits derived from the fishery cannot therefore be merely calculated from the actual amount of money made from the sale of oysters. It afforded occupation to several thousands of people, and brought money into the country; at the same time it gave evidence of the spread of wealth over Ceylon and the present prosperity of its inhabitants, while it augmented that prosperity by affording investments for capital.

E. B. DENHAM,
Assistant to the Superintendent of the Pearl Fishery and Police Magistrate.

No. 5.

The GOVERNMENT AGENT, Northern Province, to the Hon. the COLONIAL SECRETARY.

No. 168. Jaffna Kachcheri, May 27, 1903.

Pearl Fishery.

SIR,—WITH reference to my report on the Pearl Fishery of 1903, forwarded with my letter No. 161 of 19th instant, I have the honour to send herewith statements furnished by the Postmaster-General to be added to my report.

I am, &c.,
R. W. IEVERS,
Government Agent.

Annexures.

1.—Statement of the Weights of Parcels containing Pearls sent to India from Pearl Fishery Post Office from February 11 to April 25, 1903.

Station to.	Weight. lb.	oz.
Bombay	145	13
Karmala	0	5
Madras	0	4
Calcutta	0	14
Kayalpatnam	0	5½
Darjeeling	0	6
Jayapoor	0	10½
Total ...	148	10

NOTE.—Total declared value of the above parcels of pearls was Rs. 252,950.

2.—Statement of Telegraph Stamps sold at the Pearl Fishery Post and Telegraph Offices from February to April, 1903.

Month.	Total Amount. Rs.	c.
February	420	0
March	3,755	0
April	2,285	10
Total ...	6,460	10

3.—Statement of Messages received at the Pearl Fishery Telegraph Office from February 1 to April 24, 1903.

Description of Messages.	February. Number of Messages.	March. Number of Messages.	April. Number of Messages.
Inland received messages ...	249	2,300	997
Indian do. ...	55	489	330
Foreign do. ...	—	—	—
Inland State do. ...	101	133	87
Total ...	405	2,922	1,414

4.—Statement of Messages despatched from the Pearl Fishery Telegraph Office from February 1 to April 24, 1903.

Description of Messages.	February.		March.		April.	
	Number of Messages.	Value.	Number of Messages.	Value.	Number of Messages.	Value.
		Rs. c.		Rs. c.		Rs. c.
Inland sent messages	532	190 15	2,696	1,100 75	963	444 80
Indian sent messages	58	123 75	407	1,165 7	249	590 98
Foreign sent messages	—	—	—	—	—	—
	590	313 90	3,103	2,265 82	1,212	1,035 78
Inland sent State messages	166	194 70	239	394 50	141	197 15
Total ...	756	508 60	3,342	2,659 32	1,353	1,232 93

No. 6.

The POSTMASTER-GENERAL to the Hon. the COLONIAL SECRETARY.

Postmaster-General's Office,
Colombo, September 21, 1903.

The Pearl Fishery, 1903.

SIR,—REFERRING to your letter No. 386 of the 22nd August, 1903, I have the honour to forward a memorandum on the post and telegraph work at the late pearl fishery. The delay in forwarding this memorandum is due to the endeavour to get the figures as accurate as possible.

I am, &c.,
H. L. MOYSEY,
Postmaster-General.

Memorandum referred to.

THE notice that a pearl fishery would take place at Marichchikaddi on or about the 22nd February, 1903, was published by the Colonial Secretary on the 22nd December, 1902, and steps were at once taken to arrange for postal and telegraphic facilities.

It was at first proposed to send the mails from and to the camp *viâ* Mannar, and the Government Agent, Northern Province, suggested that all valuable packets should be sent in an iron chest once a week under police escort to Vavuniya, the ordinary mails going by runners daily; he further suggested a telegraph line on bamboo poles from the Camp to the main coast line. The latter suggestion was not adopted, it being thought inadvisable to loop in the camp on bamboo poles with the risk of interruption to the main traffic.

On the 21st January the Government asked whether telegraphic communication could be established at once; an officer was immediately sent with the necessary stores, and a temporary telegraph office was opened at Marichchikaddi resthouse on the 26th January.

Meanwhile inquiries were made as to the possibility of establishing a regular postal service by sea between the Pearl Fishery Camp and Colombo *viâ* Paumben and Tuticorin, and by the 3rd February a satisfactory arrangement was come to with the British India Steam Navigation Company, Limited, and the Madura Company, Limited, with the co-operation of the Madras Post Office, and the first mail by this service was despatched from Marichchikaddi on the 12th February; the post and telegraph office at the camp having been fully opened on the previous day. The daily service, however, almost immediately ceased for want of passenger traffic, and on the 5th February the Government Agent proposed by telegram a weekly despatch of valuable and registered packets by the British India steamer direct between Marichchikaddi and Colombo. This weekly service was adopted, was altered from the 16th March to a bi-weekly service each way, and so continued while the fishery lasted. On the other days of the week the ordinary mails went overland *viâ* Mannar. The Fishery Post and Telegraph Office was closed on the 24th April, the furniture and stores being taken charge of by the Government Agent for use next year.

The total receipts at the Fishery Camp Post Office were as follows :—

	Rs.	c.
Telegraph stamps sold	6,460	0
Postage stamps sold	1,843	42
Commission on money orders	288	87
Total ...	8,592	29

but taking into account the shares due to other administrations, which at present can only be estimated, the nett revenue may be put down as—

	Rs.	c.
Telegraph	2,203	0
Postal	1,700	0
Money orders	247	0
Total ...	4,150	0

The expenditure was as follows :—

	Rs.	c.
Conveyance of mails	423	16
Construction of telegraph	129	58
Stores, postal and telegraph	671	90
Freight	129	62
Transport of staff	273	0
Allowances	1,033	74
Total ...	2,661	0

The office was staffed from the regular establishment. The nett gain to the revenue on account of the Post and Telegraph Department was Rs. 1,489.

XXXV.—1903.

PAPERS

RELATING TO

THE COST OF CONSTRUCTION OF THE KELANI VALLEY RAILWAY.

Ordered by His Excellency the Governor to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 25 cents.

1903.

THE COST OF CONSTRUCTION OF THE KELANI VALLEY RAILWAY.

No. 1.

The Hon. the COLONIAL SECRETARY to the CROWN AGENTS FOR THE COLONIES.

Colonial Secretary's Office,
No. 36. Colombo, January 22, 1903.

GENTLEMEN,—I AM directed to state for the information of the Consulting Engineers that provision has been made in the Estimates of this year for a sum of Rs. 25,000 on account of the survey of the proposed extension of the Kelani Valley Railway to Ratnapura, and that MR. Phillimore has been asked to submit proposals for carrying out the survey.

2. In this connection I am to inform you that a motion was made in the Legislative Council that as the cost of working and upkeep of the existing line is largely increased by the number and severity of the curves instructions should be given to minimize the curves as much as possible, even at an increase of the initial cost. It was explained in answer to the motion that as the country through which the Ratnapura line will pass is broken and the prospects of traffic not very large, adoption of the recommendation of the motion would render the cost of the proposed line prohibitive, and would also defeat the main object of the adoption of the 2 ft. 6 in. gauge on the Kelani Valley, namely, to obtain greater flexibility. It was, however, explained that it would be arranged by Mr. Phillimore that no curves should be put in by surveyors on the proposed line without having first been sanctioned by him, and that in grading the section a certain amount of compensation for curves would be allowed, *i.e.*, that where a grade occurred on a curve the gradient would be reduced in proportion to the sharpness of the curves. Under these circumstances I am to request that the proposed survey should be planned, so that when economy by the construction of a short curve is neutralized by additional cost in working the railway in consequence of the adoption of the more acute curve, preference should, other things being equal, be given to the flatter curves, and to ask that the attention of the Consulting Engineers should be especially invited to the points above referred to.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 2.

The CROWN AGENTS FOR THE COLONIES to the Hon. the COLONIAL SECRETARY.

Downing street, London,
No. 94/E. 274/4. March 27, 1903.

Kelani Valley Railway, Ratnapura Extension.

SIR,—I HAVE the honour to acknowledge the receipt of your letter of the 22nd January, No. 36, on the subject of the survey for the proposed extension of the Kelani Valley Railway to Ratnapura.

2. We referred the matter to the Consulting Engineers, and I beg to enclose, for the information of the Colonial Government, a copy of their reply.

I have, &c.,
M. A. CAMERON.

Enclosure in No. 2.

Messrs. GREGORY, EYLES, & WARING to the CROWN AGENTS FOR THE COLONIES.

March 19, 1903.

Ceylon Government Railway: Kelani Valley Line. Proposed Extension to Ratnapura.

GENTLEMEN,—WE have the honour to acknowledge the receipt of your communication marked E 274/4 of the 18th ultimo, with which you enclosed for our information and observations a copy of a letter, No. 36 of the 22nd January last, to your address from the Hon. the Colonial Secretary of Ceylon.

2. From the Colonial Secretary's letter we observe that a sum of Rs. 25,000 has been provided in the Estimates for this year on account of the survey of a proposed extension of the Kelani Valley Railway to Ratnapura, and that Mr. Phillimore, the Chief Resident Engineer of that line, has been instructed to submit proposals for carrying it out.

3. We also learn that a motion has been made in the Legislative Council of Ceylon to the effect that as the cost of working and upkeep of the existing line (by which we presume the portion of the Kelani Valley Railway now open for traffic is meant) is largely increased by the number and severity of the curves instructions should be given to minimize the curves as much as possible, even at an increase of the initial cost, and that in answer to this motion it has been explained by the Government that, as the country through which the Ratnapura line will pass is broken and the prospects of traffic not very large, adoption of the recommendation of the motion would render the cost of the proposed line prohibitive, and would also defeat the main object of the adoption of the 2 ft. 6 in. gauge on the Kelani Valley line, viz., to obtain greater flexibility. It was however explained that it would be arranged by Mr. Phillimore that no curve should be put in without having been first sanctioned by him, and that in grading the section a certain amount of compensation for curves would be allowed, *i.e.*, that where a grade occurred on a curve the gradient would be reduced in proportion to the sharpness of the curve.

4. Under these circumstances the Hon. the Colonial Secretary requests that the proposed survey should be planned, so that when economy by the construction of a short curve is neutralized by additional cost in working the railway in consequence of the adoption of the more acute curve, preference should, other things being equal, be given to the flatter curves, and asks that our attention should be specially invited to these points.

5. We believe that the motion in the Legislative Council was made by the Hon. Mr. Rosling, the Planting Representative, and we may at the outset state that we hail it with satisfaction as showing that this influential body of the public through their representative, and we suppose we may add the public generally, are at last realizing by experience what we have so often pointed out, viz., that economy in first cost of construction by adopting a narrow gauge line with steep gradients and sharp curves may be too dearly purchased.

6. We may specially invite your attention on this point to our report to your address of the 30th July, 1897, upon a proposal to construct a portion of the Ceylon Northern Railway upon a gauge of 2 ft. 6 in., in the 8th and 9th paragraphs of which we wrote as follows : "The conditions in regard to the 2 ft. 6 in. gauge are not laid down, but it would appear from the despatch that they are to be of such a character as to provide a line at the least possible first cost. It is evident that by adopting a surface line with heavy gradients, sharp curves, and very light rails, savings in first cost can readily be made, but these savings would be effected at an increased annual cost in working and maintenance, provided always that the governing condition of equality in traffic be observed, a condition altogether independent of gauge or construction, and in comparing the relative advantages of the two gauges this increased annual charge must be taken into consideration. So far as we are aware there is nothing in the gauge of 2 ft. 6 in. which should cause it to best combine economy of construction and maintenance with efficiency, advantages claimed for it in His Excellency's despatch. Its cost under the same ruling conditions would be but little less than that of the metre gauge, and while we have no doubt that the present estimated goods traffic of between 20,000 and 30,000 tons per annum could readily be dealt with on a light line on the 2 ft. 6 in. gauge, if the general belief is justified that the construction of the line by opening up the country will very materially increase the traffic, the time will not be far distant when the narrowness of the gauge by limiting the power of the locomotives will render it very difficult to carry on the work without a practical reconstruction of the line, and the use of heavier rails and more powerful locomotives."

7. As regards the particular case of the Kelani Valley Railway, the conditions under which the original survey was made are contained in a letter No. 60, dated the 5th May 1896, from the Hon. the Colonial Secretary to Mr. Waring, then Chief Resident Engineer, in which the following instructions were given : "The object of Government in adopting the narrow gauge in preference to the standard gauge would be economy. It is possible, if not probable, that the cost of constructing a railway on the standard gauge will be too great to allow of such a railway being remunerative, if the rates are such as to enable it to compete successfully with the road and river. If the saving which would follow the adoption of a metre gauge would be immaterial, as you appear to maintain, the construction of such a railway will be equally inexpedient. Under these circumstances His Excellency considers that the choice must be between a railway of 5 ft. 6 in. gauge and a railway or tramway of say 2 ft. gauge of the same type as the Darjeeling Railway. This railway or tramway would be of the cheapest description possible consistently with efficiency and reasonable durability. The high road should be utilized as far as possible, also existing bridges. The rails, curves, and gradients should, as far as possible, be those adopted for the Darjeeling Railway. Fencing and platforms should be dispensed with, and the stations should be of the cheapest and most modest description, indeed, probably, substantial sheds would suffice, except at the termini."

8. It was generally in accordance with these instructions, except that the gauge was altered from 2 ft. to 2 ft. 6 in., that the line in question was first surveyed by the late Mr. P. A. Mackintosh, and in considering his report upon and estimate for the work in our letter to your address of the 25th March, 1898, we wrote as follows : "In his desire, however, to meet the views of the Government for the greatest economy in construction he has in some of his proposals gone beyond what would in our opinion be desirable, and particularly when the running and maintenance charges are also duly considered," and in transmitting our report to the Under Secretary of State on the 5th April, 1898, you thoroughly endorsed our views.

9. The result of these representations was that a re-survey of the whole line was ordered, the curves and trace generally being much improved, and it is upon this re-survey that the construction of the line is being carried out.

10. As the pratical experience of the working of the Kelani Valley Railway would seem to have proved the correctness of the opinions we expressed in the letters from which we have quoted, and which we would add we still hold, we will, when the particulars of the survey come before us, see, so far as we are able, that effect has been given to the instructions which the Government have conveyed to Mr. Phillimore, but these will naturally increase the cost of construction, and we fear that it will often be difficult for any engineer to determine the point at which economy in construction, by the use of a sharp curve, becomes neutralized by the additional cost of working, as the former is a fixed sum and the latter is governed by the amount of traffic to be conveyed, which is of course at present not accurately known, and which may, when the line is built, be subject to great variations.

11. We have on a previous occasion pointed out that extensions of the Kelani Valley line might tend to divert traffic from the existing broad-gauge Main line, and is this connection we may perhaps draw attention to the fact that provided the extension is made to Ratnapura, the distance from Haputale Pass to Colombo by the new route will be 121½ miles, of which 56½ miles will be by existing main cart road, whereas the distance by the open line is 153⅝ miles. It is possible, therefore, that a portion of the traffic which now goes to the Main line would be brought down to Ratnapura station by cart, and if this occurred only to a moderate extent the existing railway to Haputale might become unremunerative, and an amount of traffic thrown on the Kelani Valley Railway in excess of the capabilities of the narrow-gauge line.

We have, &c.,
GREGORY, EYLES, & WARING,
Consulting Engineers.

No. 3.

The Hon. the COLONIAL SECRETARY to the CHIEF RESIDENT ENGINEER, Kelani Valley Railway.

Colonial Secretary's Office,
No. 30. Colombo, April 18, 1903.

Narrow-gauge Railways in Ceylon: Cost.

SIR,—I AM directed by the Governor to request you to furnish me as early as possible with an approximate estimate of the final cost of the Kelani Valley Railway under its different heads, comparing it with the original estimate.

His Excellency also desires to be informed as to when the exact cost of the railway under the different heads will be ascertainable.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 4.

The CHIEF RESIDENT ENGINEER, Kelani Valley Railway, to the Hon. the COLONIAL SECRETARY.

15, Horton place,
No. 79. Colombo, June 9, 1903.

Narrow-gauge Railways in Ceylon: Cost.

SIR,—REFERRING to your letter No. 30 of 18th April, 1903, I have the honour to enclose herewith an approximate estimate of the final cost of the Kelani Valley Railway. I am unable at present to state definitely when the exact cost of the railway under the different heads will be ascertainable; this will not, however, be before the end of 1903. It is probable that surplus stores, &c., remaining over from construction will not be all disposed of and the proceeds credited to the Kelani Valley Railway by that date, but with this exception the accounts should, I think, be fairly complete at the close of 1903.

2. I have shown the estimate in three different statements, viz.:—

A.—Statement of the estimated final cost of each different head as compared with the revised estimate of 1901 (Sessional Paper XLV. of 1901);

B.—Statement of the estimated final cost of each head as compared with the cost in original estimate of 1897 (Sessional Paper XVI. of 1897); and

C.—Comparative statement in a simplified form of the cost per mile according to the estimates of 1897, 1900, 1901, and 1903.

3. As regards Statement A, it will be seen that there is an excess on Schedule No. 1 of Rs. 585,679 and a saving on Schedule No. 2 of Rs. 28,417, or a total excess on both schedules of Rs. 557,262. I much regret this considerable excess, for the bulk of which I am responsible, and which is for the most part due to insufficient estimating of the work to be carried out locally. This work has been done chiefly by petty contract or piecework, moderate rates having been paid, and where daily labour has been made use of the rates of wages have also been kept low. Endeavour has been made not to incur expenditure which has not been necessary either for the safety of the line, the speedy completion of the work, or which will not prove to be remunerative in the future.

In the first paragraph of my letter No. 174 of 28th October, 1901 (Sessional Paper XLV. of 1901), I stated that "the figures in the revised estimate are based on the actual cost of the work carried out up to date, the work remaining to be done being calculated at average rates." Although the contractors' rates then current were adhered to,* or in many instances reduced, the work on the remaining portion of the line has proved to be much more difficult, especially in foundations of bridges and culverts and in rock cuttings, than the work executed previous to the preparation of the estimate, which has, chiefly on this account, proved insufficient.

Under paragraph 4 K of the same letter I stated that "in the actual cost of the different heads of work, on which the revised estimate has been based, General Charges and General Stores have not been taken into account," and for this reason I allowed 10 per cent. for Contingencies. This was, however, an erroneous method, as at that time the amount charged to General Charges and General Stores about equalled the sum allotted for Contingencies, so that the effect of setting off the amounts for General Stores and General Charges against Contingencies nullified the amount allowed for the latter. It would have been better to have taken into account the amounts expended on General Charges and General Stores in fixing the rates for the various heads of work and to have allowed for Contingencies in addition.

4. The following notes refer to the different heads of the estimate, and are lettered in accordance with the estimate:—

A, *Felling Trees and Clearing Land.*—There is an excess of Rs. 1,196, due to the felling and clearing being heavier at the Yatiyantota end than had been the case in the work carried out up to the date when the estimate was prepared.

B, *Earthwork.*—There is an excess of Rs. 121,007. The quantity of rock estimated was 206,653 cubic yards; the quantity actually paid for up to the end of April has been 260,374 cubic yards. In the varying strata through which the Kelani Valley Railway passes it is impossible to estimate accurately in advance the quantity of rock or hard soil that will be met with in the cuttings, and in many cases it was also necessary to use hard soil for the banks, which had in all cases been estimated as composed of soft soil. An error which was made by me in the estimate of 1901 was reducing the rate for earth from 50 cents per cubic yard to 33⅓ cents per cubic yard; the latter had been the actual cost of earth up to the date on which the estimate was made, but I had not taken sufficiently into consideration the cost of subsequent wastage and maintenance of banks, of turfing slopes, and of retaining walls; if the original rate for earth had been retained, there would have been no excess on earthwork.

* Almost the only case in which a contractor's rate has been raised is that for excavation in solid gneiss rock.

C, *Bridges.*—There is an excess of Rs. 229,623, which is chiefly due to the difficult nature of the foundations met with in the last 15 miles. Completion estimates will be prepared of all the important bridges, and I shall then be able to state in greater detail to what the excess is due.

D, *Culverts.*—There is an excess of Rs. 92,289. Three hundred culverts and 89 pipes were estimated for, but it was found necessary to provide 325 culverts and 110 pipes. The foundations in the last 15 miles have also been more difficult than on the rest of the line.

E and F, *Permanent Way and Switches and Crossings.*—This item includes the laying of permanent way, switches and crossings, and ballast, but not the cost of steel rails and fastenings, switches and crossings, and sleepers, which is provided for in Schedule No. 2. There is an excess on this item of Rs. 108,202.

In my estimate of 1901 I did not allow sufficient for the transport of permanent way, and the cost of ballast was also under-estimated. The repair of locomotives and ballast wagons was also not considered in the estimate, nor the providing of buffer stops, trollies, and other sundries. The cost of laying permanent way and ballast has been considerably increased through having to lay the last 11 miles by trolly and cart. It was considered advisable to do this, and not to wait for the completion of the Sitawaka bridge.

G and H, *Level Crossings and Metalling and Gravelling Roads.*—There is an excess of Rs. 8,981. This is due to greater length of roads in approaches to stations, &c., being constructed than had been estimated for.

I, *Stations.*—There is an excess of Rs. 6,900. In your letter No. 47 of 1st September, 1902, I was authorized to exceed the provision of Rs. 15,150 in my estimates for the cost of furniture and non-consumable stores by Rs. 6,561·40. Lamp posts, which had not been previously estimated for, were also provided for all stations at the request of the General Manager. An additional turntable has also been provided for Avisawella.

J, *Miscellaneous Works.*—This item is for platelayers' lines and residences for Platelaying Foremen. There is an excess of Rs. 17,481. To meet the requirements of the General Manager the platelayers' lines have been built in sets of seven rooms, instead of four rooms as provided for in the estimates, and an additional residence for a European Platelaying Foreman has been erected at Avisawella, as authorized in your letter No. 76 of 9th December, 1902.

K, *Contingencies.*—In the present estimate I have allowed the same amount for Contingencies as in the former estimate, having reduced the amount of General Charges and General Stores actually expended by a corresponding amount.

L, *Electric Telegraph.*—There is an excess of Rs. 1,978. In your letter No. 289 of 1st April, 1903, you instructed the Hon. the Treasurer to remit a further sum of Rs. 1,700 to meet supplementary expenditure on account of the construction of the electric telegraph line, and I have allowed a small additional sum in the estimate for Contingencies on this head. The reasons for the excess are given in letter No. 311 of 20th February, 1903, from the Superintendent of Telegraphs to the Postmaster-General, and consist chiefly of difficulties in labour and supervision.

M, *Land and Compensation.*—There is a saving of Rs. 5,613. This is accounted for by the value of the land acquired since the estimate of 1901 being less than the value of the land acquired previously.

N, *Engineering and Administration.*—There is an excess of Rs. 40,117.* In framing the estimate the following were not taken into consideration; Salary and charges of Consulting Engineers, passage money of Assistant Engineers, rent of offices, and promotions; and the Accountant who supplied the particulars for this head in the estimate is partly responsible for the omissions.

O, *Steel in Bridge Girders and Cast Iron in Bed Plates.*—There is a saving of Rs. 5,221. Some of the bridges which had been estimated for as girder bridges have been built as arches; this has increased the cost of masonry under C in Schedule No. 1, but has decreased the cost of bridge girders.

O*a*, *Wrought and Cast Iron in Well Curbs and Cylinders.*—There is an excess of Rs. 899. The estimated weight was 48·6 tons, whereas the actual weight is 50·5 tons; the estimated rate per ton was Rs. 290, but the actual cost has been Rs. 294 per ton.

O*b*, *Steel in Culvert Girders.*—There is an excess of Rs. 2,759. A larger number of culvert girders has been provided than estimated for.

P, *Permanent Way Steel Rails;* Q, *Permanent Way Fastenings;* R, *Switches and Crossings;* and S, *Sleepers.*—There is an excess of Rs. 22,053 on steel rails, Rs. 5,534 on fastenings, Rs. 5,353 on switches and crossings, and Rs. 12,635 on sleepers. The chief reason for the excess in these items is that it has been necessary to lay down additional temporary sidings, and some of these it will be advisable to retain, especially at Avisawella, which is at present the temporary terminus, and will eventually become the junction station for the Ratnapura line, if that railway is made.

The Crown Agents' departmental charges of 1 per cent. were not taken into account when framing the estimate, and more crossing sleepers were required than allowed for in the estimate; the long sleepers under the point boxes had not been included.

It is not possible to arrive at a very accurate estimate of the excess on these items until stock has been taken of the surplus materials which remain, and which will be credited to construction after platelaying has been completed.

T, *Rolling Stock.*—There is an excess of Rs. 64,500. The cost of the following was under-estimated by me:—

	Estimated Cost Delivered at Maradana. Rs.	Actual Cost Rs.
Five first and second class bogie carriages	45,365	82,043
One travelling crane	5,918	10,034

The duplicate parts of engines amounting to Rs. 7,920 were not allowed for in the estimate; the actual cost of erection of the rolling stock has considerably exceeded the cost as estimated by the Acting General Manager in 1901.

* Deducting the cost of original survey and preliminary expenses, the cost per mile of Engineering and Administration is only slightly in excess of the Consulting Engineers' estimate of 1900.

U, *Contingencies.*—There is a saving of Rs. 173,411. The items which have been charged to Contingencies up to the present are as follows, none of them having been allowed for in the former estimate :—

	Rs.
Proportionate amount expended in raising loan of £1,400,000	43,500
Signals at all stations	12,500
Lighting Maradana Junction with gas	4,000

and an additional sum of Rs. 5,000 has been provided in the present estimate to cover additional Contingencies which may occur, but are at present unforeseen.

5. As regards the length of line given in Statements B and C, it may be noted that in the estimate of 1901 the length of line was taken as 48½ miles; owing to deviations, which had not been considered in that estimate, the actual length of line from the buffer stop at the west end of Maradana Junction station to the buffer stop at the east end of the Yatiyantota station is 48 miles 2·80 chains, and for simplicity the length of the line has been taken in the present estimate as 48 miles. The mileage of the stations on which the rates and fares are calculated is taken from the east end of the Maradana passenger platform, and the distance from that point to the centre of the passenger platform at Yatiyantota is 47 miles 62 chains.

I am, &c.,

J. PHILLIMORE,
Chief Resident Engineer,
Kelani Valley Railway.

A.—Statement of Estimated Final Cost as compared with the Revised Estimate of 1901 (Sessional Paper XLV. of 1901).

		Estimated Amount (Sessional Paper XLV. of 1901).	Estimated Final Amount.	Excess.	Saving.	Nett Excess.	Remarks.
	Schedule No. 1.	Rs.	Rs.	Rs.	Rs.	Rs.	
A	Felling trees and clearing land	17,604	18,800	1,196	—	—	Excess due to greater cost of clearing on last portion of line.
B	Earthwork ...	535,993	657,000	121,007	—	—	Excess due to quantity of rock exceeding estimated quantity and to rate for earth having been erroneously reduced.
C	Bridges	578,377	808,000	229,623	—	—	Excess due to difficult foundations.
D	Culverts	271,711	364,000	92,289	—	—	Excess due to a number of additional culverts being provided.
E & F	Permanent way and switches and crossings ...	216,798	325,000	108,202	—	—	Excess due to increased cost of transport of material.
G	Level crossings ...	10,621	52,000	8,981	—	—	Excess due to increased length of roads in approaches to stations.
H	Metalling and gravelling roads	32,398					
I	Stations	321,100	328,000	6,900	—	—	Excess due to increase in furniture and stores supplied to the General Manager.
J	Miscellaneous works ...	22,019	39,500	17,481	—	—	Excess due to increase in number of rooms in platelayers' lines and to an additional residence for a Foreman Platelayer.
K	Contingencies ...	200,662	200,662	—	—	—	—
	Total of Schedule No. 1 ...	2,207,283	2,792,962	585,679	—	585,679	
	Schedule No. 2.					Nett Savings	
L	Electric telegraph ...	41,022	43,000	1,978	—	—	Excess due to difficulties with labour and supervision (chiefly).
M	Land and compensation ...	350,613	345,000	—	5,613	—	Saving due to land being less valuable than estimated.
N	Engineering and administration	244,883	285,000	40,117	—	—	Excess due to omissions in estimate.
O	Steel in bridge girders and cast iron in bed plates ...	214,721	209,500	—	5,221	—	Saving due to some girder bridges being altered to arches.
O*a*	Wrought and cast iron in well curbs and cylinders	32,701	33,600	899	—	—	Excess due to slight increase in weight and cost of well curbs.
O*b*	Steel in culvert girders ...	18,741	21,500	2,759	—	—	Excess due to larger number of girders.
P	Permanent way steel rails...	440,947	463,000	22,053	—	—	Excess due to additional sidings provided, and English charges omitted in estimate.
Q	Permanent way fastenings...	106,966	112,500	5,534	—	—	
R	Switches and crossings ...	28,647	34,000	5,353	—	—	
S	Sleepers	260,365	273,000	12,635	—	—	
T	Rolling stock ...	644,500	709,000	64,500	—	—	Excess due to increase in cost of first class carriages and increase in cost of erection of rolling stock.
U	Contingencies ...	238,411	65,000	—	173,411	—	—
	Total of Schedule No. 2 ...	2,622,517	2,594,100	155,828	184,245	28,417	
	Total of both Schedules ...	4,829,800	5,387,062	—	—	—	
	Total Excess ...	—	—	—	—	557,262	

B.—Statement of Estimated Final Cost as compared with Cost in Original Estimate of 1897 (Sessional Paper XVI. of 1897).

Estimate of 1897; Length, 50 miles.

SCHEDULE No. 1.

		Amount. Rs.	Rate per Mile. Rs.
A	Felling trees and clearing land	10,000	200
B	Earthwork	301,727	6,034
C	Bridges	227,014	4,540
D	Culverts	207,342	4,147
E and F	Permanent way and switches and crossings	152,418	3,048
G and H	Level crossings and metalling and gravelling roads	29,488	590
I	Stations	217,791	4,356
J	Miscellaneous works	21,133	423
K	Contingencies	116,691	2,334
	Total of Schedule No. 1	1,283,604	25,672

SCHEDULE No. 2.

		Amount. Rs.	Rate per Mile. Rs.
L	Electric telegraph	25,000	500
M	Land and compensation	200,000	4,000
N	Engineering and administration	120,000	2,400
O	Steel in bridge girders and cast iron in bed plates	67,528	1,351
O*a*	Wrought and cast iron in well curbs and cylinders	—	—
O*b*	Steel in culvert girders	7,899	158
P	Permanent way steel rails	348,850	6,977
Q	Permanent way fastenings	83,599	1,672
R	Switches and crossings	26,350	527
S	Sleepers	177,878	3,557
T	Rolling stock	391,711	7,834
U	Contingencies	144,881	2,898
	Total of Schedule No. 2	1,593,696	31,874
	Total of both Schedules	2,877,300	57,546

Estimate of 1903; Length, 48 miles.

SCHEDULE No. 1.

		Amount. Rs.	Rate per Mile. Rs.
A	Felling trees and clearing land	18,800	393
B	Earthwork	657,000	13,868
C	Bridges	808,000	16,833
D	Culverts	364,000	7,583
E and F	Permanent way and switches and crossings	325,000	6,771
G and H	Level crossings and metalling and gravelling roads	52,000	1,083
I	Stations	328,000	6,833
J	Miscellaneous works	39,500	823
K	Contingencies	200,662	4,180
	Total of Schedule No. 2	2,792,962	58,187

SCHEDULE No. 2.

		Amount. Rs.	Rate per Mile. Rs.
L	Electric telegraph	43,000	896
M	Land and compensation	345,000	7,188
N	Engineering and administration	285,000	5,938
O	Steel in bridge girders and cast iron in bed plates	209,500	4,365
O*a*	Wrought and cast iron in well curbs and cylinders	33,600	700
O*b*	Steel in culvert girders	21,500	448
P	Permanent way steel rails	463,000	9,641
Q	Permanent way fastenings	112,500	2,344
R	Switches and crossings	34,000	709
S	Sleepers	273,000	5,688
T	Rolling stock	709,000	14,771
U	Contingencies	65,000	1,355
	Total of Schedule No. 2	2,594,100	54,043
	Total of both Schedules	5,387,062	112,230

C.—Comparative Statement of Cost per Mile according to Estimates of 1897, 1900, 1901, and 1903.

		Sessional Paper XVI. of 1897. Length, 50 miles.	Sessional Paper III. of 1900. Length, 46 miles 48 chains.	Sessional Paper XLV. of 1901. Length, 48 miles 40 chains.	Estimate of 1903. Length, 48 miles.	Remarks.
		Per Mile. Rs.	Per Mile. Rs.	Per Mile. Rs.	Per Mile. Rs.	
A	Land and compensation...	4,000	5,000	7,229	7,188	—
B	Earthwork ...	6,234	9,543	11,415	14,081	Including felling trees, clearing land, and retaining walls.
C	Bridges... ...	5,891	13,164	17,026	21,898	Including girders, well curbs, and cylinders.
D	Culverts ...	4,305	5,293	5,988	8,031	Including girders.
E	Roads and level crossings	590	887	887	1,083	—
F	Electric telegraph ...	500	500	846	896	—
G	Ballast and permanent way	15,781	21,348	21,726	25,153	Including provision and laying of ballast, rails, sleepers and switches, and crossings.
H	Stations and buildings ...	4,779	6,346	7,075	7,656	Including staff quarters for Engineering, Traffic, and Locomotive Departments.
I	Rolling stock ...	7,834	13,412	13,289	14,771	—
J	Engineering and administration ...	2,400	3,219	5,049	5,938	In the two last estimates the cost of original survey and of preliminary expenses is included.
K	Contingencies ...	5,232	7,871	9,053	5,535	
		57,546	86,583	99,583	112,230	

No. 5.

The Hon. the COLONIAL SECRETARY to the CROWN AGENTS FOR THE COLONIES.

No. 355.

Colonial Secretary's Office,
Colombo, May 29, 1903.

GENTLEMEN,—I AM directed by His Excellency the Governor to acknowledge the receipt of your letter No. 94 E 274/4 of the 27th March, forwarding a copy of a letter from the Consulting Engineers regarding the proposed extension of the Kelani Valley Railway to Ratnapura.

2. His Excellency notes that in paragraph 5 of the Consulting Engineers' letter, where they refer to the Planting Member's motion in the Legislative Council on the subject of the desirability of minimizing the curves on the proposed extension, the Consulting Engineers use the following words: "We hail it (*i.e.*, the motion) with satisfaction, as showing that this influential body of the public through their representative, and we suppose we may add the public generally, are at last realizing by experience what we have so often pointed out, viz., that economy in first cost of construction by adopting a narrow gauge line with steep gradients and sharp curves may be too dearly purchased."

3. The Governor desires me to point out that the Consulting Engineers have arrived at a mistaken conclusion. Although it is true that some, including the Hon. Mr. Rosling, the Planters' Representative in the Legislative Council, are of opinion that the curves on the Kelani Valley Railway are in some cases unnecessarily severe, yet there is no section of the public which is even inclined to accept the Consulting Engineers' views when they are hostile to the construction of narrow gauge railways in Ceylon.

4. It is true—and the fact has caused the Government much perplexity—that the cost of the Kelani Valley Railway threatens to be almost prohibitive, and this, His Excellency the Governor fears, will greatly check railway extension in the Colony. But the reason seems to be that instead of obtaining a light railway of the type indicated in His Excellency the Governor's despatch to the Secretary of State, No. 144 of 6th May, 1897, printed in Sessional Paper No. II. of 1898 (a copy of which is herewith enclosed*), there has been constructed a heavy railway on a 2 ft. 6 in. gauge, which will have all the inconveniences, especially as regards cost of construction, and consequently heavy rates, and few of the advantages of a light railway. The fact that the latest estimated cost of the Kelani Valley Railway is no less than Rs. 99,583 per mile, and that even this estimate is to be increased, while the cost of the broad gauge Northern Extension is only Rs. 55,340 per mile, certainly seems to require explanation. The same difficulty presents itself regarding the Uda Pussellawa Railway, the original estimated cost per mile of which (Rs. 47,164) is also to be increased to Rs. 82,600.

5. I am to add that the above facts are not yet fully known to the public, but sufficient information has leaked out to arouse a feeling of indignation which found expression in a motion by the Hon. Mr. Rosling—the gentleman on whose conversion the Consulting Engineers congratulate themselves—demanding the appointment of a Commission of Inquiry. To this the Governor feels bound to agree, but His Excellency does not think that the inquiry can be satisfactorily made until the real cost of the railway is definitely known.

6. With reference to paragraph 11 of the Consulting Engineers' report, pointing out that the extension of the Kelani Valley Railway to Ratnapura might tend to divert to itself cart traffic now going to the Main line, I am directed to state that the furthest estates along the Haputale road which cart down traffic to Ratnapura are Nonpareil near the 93rd milepost and Hiralouvah near the 96th

* Not reproduced.

milepost. It is very improbable that a station at Ratnapura would tempt estates above Hiralouvah, as the cart hire from Haldummulla to Ratnapura, nearly 50 miles, would be prohibitive. It would be more expensive to cart to Ratnapura and use the new railway than to cart the few miles to Haputale and use the Main line. I am to add that the estates in Maskeliya would not use the Ratnapura railway, as there are no facilities for transport over the precipitous dividing range between the two districts. It is true that the distance is small, but the height of the intervening mountains and the absence of a road over the range, which no Government is likely to construct, would be insuperable difficulties.

I have, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 6.

The CROWN AGENTS FOR THE COLONIES to the Hon. the COLONIAL SECRETARY.

Downing street, London,
No. 267/E. 274/4. August 25, 1903.

Kelani Valley Railway, Ratnapura Extension.

SIR,—I HAVE the honour to acknowledge the receipt of your letter No. 355 of the 29th May relating to the proposed extension of the Kelani Valley Railway to Ratnapura, and commenting upon the cost of the railway now under construction and upon that of the Uda Pussellawa Railway.

We referred your letter to the Consulting Engineers for their observations, and I enclose a copy of their reply.

From the 3rd paragraph of your letter it would appear that the letter of the Consulting Engineers of the 9th March has been read as tending to re-open the question of gauge, and that they are regarded as hostile to the construction of narrow gauge railways in Ceylon. Nothing could be further from our desire, or we feel sure from that of the Consulting Engineers, than to revive a discussion, which could serve no practical purpose, regarding the gauge upon which the Kelani Valley Railway is being made.

Messrs. Gregory, Eyles, and Waring disclaim in their reply any hostility to the 2 ft. 6 in. or other narrow gauge. This is quite in accordance with the opinions they have often expressed, and we cannot trace in their correspondence any expression of a different view.

The point which we understand the Consulting Engineers, in their letter of the 9th March, to wish to emphasize is that, while with a narrow gauge line considerable saving in first cost may be effected by using steep gradients and sharp curves, yet this saving may, if carried too far, lead to such heavy expense in working that it will not in the end prove economical. The motion stated in your letter of the 22nd January to have been made in the Legislative Council to the effect that the cost of working the present Kelani Valley line is increased by the number and severity of its curves led the Consulting Engineers to infer that they had not, in the opinion of the planting community at all events, exceeded what was reasonable in the straightening of the trace.

We make the foregoing observations in the hope of helping to clear up the misapprehension which evidently exists as to the attitude of Messrs. Gregory, Eyles, and Waring towards narrow gauge railways, and which, if not removed, might tend to prejudice them in the Colony.

In the 4th paragraph of your letter the cost of the railway is attributed to a heavy railway having been built instead of the light railway at first contemplated. The circumstances in which the type of railway was decided upon are set out at length in the Consulting Engineers' report, but it may be convenient to summarize them here.

An estimate for the Kelani Valley Railway was made by the late Mr. Mackintosh in 1897, amounting in round figures to Rs. 58,000 per mile. It was referred to the Consulting Engineers, who in March, 1898, submitted a report upon the design and estimate. Their criticisms fell under two main heads: first, that the work proposed could not be carried out for the sum named; and second, that having regard to the anticipated amount of traffic the type of line proposed would prove expensive and unsatisfactory in maintenance and working, and should be substantially improved. They stated in detail the improvements which they recommended, and the whole of their recommendations, except as to the arrangement of the Maradana station, were accepted by the Colonial Government. The construction of the railway in accordance with this improved type was then authorized by the Secretary of State.

The alterations above referred to necessitated a re-survey of the line. This was made in accordance with instructions from the Governor by Mr. Mackintosh, with the result that he put the estimate at Rs. 79,000 per mile. The Consulting Engineers approved his work and suggested no alteration in the trace or type of line, but they thought that he had under-estimated the cost of its construction,—a view justified by subsequent events,—and on this account increased the estimate to a total of Rs. 4,034,781, or Rs. 86,583 per mile. The Government were at once informed of the revision of the estimated cost of the railway, and the work proceeded on the basis of this estimate.

The type of line which has been built, recommended by the Consulting Engineers as the cheapest, which would in all the circumstances prove economical and satisfactory in working, was thus settled and definitely adopted by the Government before construction was commenced. This type has not, we are assured, been departed from, except as to stations and some other matters in which the wishes of the Government have been followed.

The cost of completion, originally estimated at Rs. 86,583 per mile, will, it is now thought, be Rs. 112,230 per mile. This is an excess of Rs. 25,647 per mile, or 29·6 per cent. over the sanctioned estimate. The excess has been fully explained in the Resident Engineer's reports to you, and in the Consulting Engineers' comments thereon. It is due principally to an under-estimate of the difficulties of construction, more especially the quantity of rock met with in cutting and the amount of waterways; the cost of land was also under-estimated, for which responsibility would scarcely lie with the railway officers; certain works not included in the estimate have, by instructions from the Government, been charged to Railway funds; and improvements in stations and rolling stock have, also with the sanction of the Government, been introduced.

We have set out the above considerations because you refer to a motion brought forward by Mr. Rosling as expressive of a feeling of indignation on the part of the public with regard to the cost of the railway. In the newspaper report of Mr. Rosling's motion we observe that he refers to the original estimate as under Rs. 60,000 per mile, and we think it possible that some of the circumstances may have been overlooked in the Colony. The fact that the Rs. 57,000 estimate was framed for a class of line which was on further consideration discarded by the Government (even for that line it was insufficient), and that the estimate on which the work was actually begun was not Rs. 57,000 but Rs. 87,000, so that the excess, instead of being nearly 100 per cent. is barely 30 per cent., puts the matter in a different light; and it seems probable that if this were explained, the feeling to which you refer might be modified.

Your letter alludes also to the fact that while the Kelani Valley Railway on a 2 ft. 6 in. gauge will cost more than Rs. 100,000 per mile, the 5 ft. 6 in. Northern Extension is likely to be built for Rs. 55,340. Messrs. Gregory, Eyles, and Waring deal exhaustively with this very natural comparison, comparing the cost of each item in the estimates and explaining where they differ. Without going into technical detail, it may be stated that the difference is chiefly due to the Northern Extension being through easy country, necessitating but light earthworks and few waterways, with stations 10 miles apart, and rolling stock of a comparatively simple type; while the Kelani Valley Railway is through difficult country, entailing heavy works, with an excessive proportion of rock and of waterways, with a station every 4 miles, and expensive rolling stock. It is these factors which principally affect the cost of railway construction, the gauge being comparatively a minor matter, and they seem to us to furnish a complete explanation of a difference in cost which would at first sight appear remarkable.

We observe that it is proposed that the Commission of Inquiry asked for by Mr. Rosling shall not sit until the railway is finished and its cost known. Should such an inquiry still be thought necessary when this time comes and all the facts have been made known, the Government will probably, having regard to the strong feeling which is stated to exist in the Colony, consider it desirable to take the utmost care to compose the Commission of members free from likelihood of previous bias, and to afford the Consulting Engineers an opportunity of expressing an opinion as to its composition.

I have, &c.,
M. A. CAMERON.

Enclosure in No. 6.

Messrs. GREGORY, EYLES, & WARING to the CROWN AGENTS FOR THE COLONIES.

July 29, 1903.

Ceylon Government Railway: Kelani Valley and Uda Pussellawa Extensions.

GENTLEMEN,—We have the honour to acknowledge the receipt of your communication marked E 274/4 of the 20th ultimo, enclosing a copy of letter No. 355, dated the 29th May last, from the Hon. the Colonial Secretary of Ceylon to your address, in which, in dealing with a paragraph of our letter of the 19th March last in reference to a motion by the Hon. Mr. Rosling, the Planters' Member in the Legislative Council, on the subject of the desirability of improving the curves on the proposed extension of the Kelani Valley Railway, His Excellency desires that it may be pointed out that we have arrived at a mistaken conclusion, as, while it is considered by some that the curves on the Kelani Valley Railway are in some cases unnecessarily severe, there is no section of the public which is even inclined to accept our views when they are hostile to the construction of narrow-gauge railways in Ceylon. It is further stated that the cost of the Kelani Valley Railway has been almost prohibitive, and that instead of obtaining a light railway, as originally proposed by His Excellency, there has been constructed a heavy railway on a 2 ft. 6 in. gauge, which will have all the inconveniences, especially as regards cost of construction and consequently heavy rates, and few of the advantages of a light railway; and it is added that the higher cost of the narrow-gauge Kelani Valley and Uda Pussellawa lines, as compared with the broad-gauge Northern Extension, certainly seems to require explanation.

2. It appears to us from the Hon. the Colonial Secretary's letter that we are regarded as strong advocates of heavy broad-gauge lines, and correspondingly hostile to the narrow gauge, although on more than one occasion we have pointed out that such is not the case, and that, so far from our experience being confined to the broad gauge, the bulk of our practice is in connection with narrow-gauge railways, including the standard 4 ft. 8½ in. gauge, the 3 ft. 6 in., 3 ft. 3⅜ in., 2 ft. 6 in., and 2 ft. gauges. What we have endeavoured to point out are the serious disadvantages attending a break of gauge, and we are still of opinion that the decision arrived at during the discussion of this question, when the construction of the Northern Railway was being considered, viz., that all main lines in the Colony should be built on the standard gauge, was a sound one, and one that will ultimately be found to be in the interests of Ceylon.

3. So far as secondary or feeder lines are concerned, it appears to be held that, apart from other considerations, the mere fact of reducing the width of the gauge must under proper conditions of construction result in large saving in first cost; as, however, we have previously pointed out, the question of gauge is the least of all the leading conditions affecting the cost of a railway, the traffic to be dealt with and the nature of the country to be traversed being the ruling factors. This is strikingly illustrated in comparing the probable cost of the broad-gauge Northern Railway with the 2 ft. 6 in. gauge line in the Kelani Valley: in these cases the rails and fastenings are identical; the sleepers on the broad gauge are longer and the ballast wider and therefore more costly than on the narrow gauge; the bridges, which have to carry approximately equal loads, are of similar types on both lines. The cause, therefore, of the cost of the Kelani Valley narrow-gauge line being nearly double that of the broad-gauge line, assuming that the rates at which work has been executed are generally similar on both railways—and we have seen nothing in the papers received from the Colony which would lead us to doubt this—must be due largely to the nature of the country traversed involving heavier works, and to greater expenditure on stations and station accommodation to meet the heavier traffic. We propose in this report to analyze somewhat closely the quantities of work and the cost of the different items in the estimates for the Northern, the Kelani Valley, and the Uda Pussellawa Extensions.

4. In dealing with the view expressed in the Colonial Secretary's letter that the Kelani Valley Railway has been constructed of too heavy a character, we would remark that the details for the construction as prepared by us were governed by the nature and extent of the traffic anticipated, and with due regard to the cost of maintenance and working, as these being permanent charges, we should, we submit, have not been justified in ignoring them with the view of reducing the first cost of construction, and we went as far as we were able in our endeavour to meet the views of the Government of the Colony for as cheap a railway as practicable by reducing as much as was advisable the widths of cuttings and banks and by allowing the use of unusually sharp curves, which are now the subject of adverse comment, but which saved heavy works and consequently heavy additional cost. It is, we would venture to point out, impossible to build a cheap light line through difficult country, which will deal with a comparatively large traffic, without incurring such heavy traffic and maintenance charges as would far outweigh the saving effected in original outlay.

5. We will now compare in detail the estimates for the three railways, commenting on such points as affect the comparison, and as Mr. Phillimore has sent us with his official letter A. O., of the 11th ultimo, a copy of his letter to the Hon. the Colonial Secretary, Ceylon, No. 79 of the 9th June, 1903, giving an approximate estimate of the final cost of the Kelani Valley Railway, we are able as regards that line to deal generally, except where otherwise stated, with the figures given in that estimate.

6. As regards the first item appearing in the estimate for the Kelani Valley line, viz., *Felling Trees and Clearing Land*, the total cost of which is Rs. 18,800, equal to Rs. 393 per mile, we would state that the corresponding expenditure upon the Northern and Uda Pussellawa Railways does not form a separate item, but is included under the head of "Earthwork."

7. The estimated mileage cost of earthwork upon the Kelani Valley Railway is Rs. 13,688, the corresponding figures for the Uda Pussellawa and the Northern Railways being respectively Rs. 10,409·50 and Rs. 4,635·80, the much higher mileage cost of this item on the two former lines being fully accounted for by the larger quantities, especially of rock excavation, per mile estimated as being entailed by their construction, the figures being :—

The Northern Railway.

Rock excavation, per mile	...	...	...	260 cubic yards
Earth do.	...	...	...	7,995 do.

The Kelani Valley Railway, as per Mr. Phillimore's Estimate of 28th October, 1901.

Rock excavation, per mile	...	...	...	4,261 cubic yards
Earth do.	...	...	...	13,980 do.

From the figures given in Mr. Phillimore's latest estimate we gather that the rock actually excavated and paid for to the end of April last amounted to 260,374 cubic yards, equal to 5,424 cubic yards per mile. We have no information as to how this increased quantity of rock excavation affected the quantities of earth to be excavated, but as the cost of the excavation of rock is approximately three times that of earth, it must have materially increased the expenditure.

The Uda Pussellawa Railway.

Rock excavation, per mile	...	...	...	3,395 cubic yards
Earth do.	...	...	...	10,633 do.

To fully appreciate the significance of these figures as indicating the much more difficult country traversed by both the Kelani Valley and Uda Pussellawa Railways, as compared with that through which the Northern line passes, and to which the greater cost of this item is due, it should not be forgotten that not only are the curves much sharper and the gradients steeper, but also the cross sections of both cuttings and embankments are much smaller on the former railways, which are on the 2½ ft. gauge, than they are on the Northern Railway of 5½ ft. gauge.

8. *Bridges.*—The estimated mileage cost of this item is Rs. 2,956·07 upon the Northern, Rs. 16,833 upon the Kelani Valley, and Rs. 1,857·70 upon the Uda Pussellawa Railway. For the total sums appearing in the estimate under this head, about 121 bridges having an aggregate opening of some 4,125 lineal ft., equal to (say) 21 ft. per mile ; about 60 bridges having an aggregate opening of some 1,555 lineal ft., equal to (say) 32 ft. per mile; and 11 bridges having an aggregate opening of 249 lineal ft., equal to 12·4 ft. per mile, are provided on these three railways respectively, and these figures further show that the average span per bridge is 34 ft. on the Northern Railway, 25·9 ft. on the Kelani Valley Railway, and 22·6 ft. on the Uda Pussellawa line. In this item the latter railway must be omitted from comparison, for, as the line runs in places at the edge of the road, it has been found possible to use to some extent in five cases the existing road bridges; but as regards the Kelani Valley and Northern Railways, the higher cost of the bridges on the former is accounted for by the difficulty and cost entailed in getting in the foundations on the last 15 miles of the railway by the greater opening required per mile of railway, and by the generally smaller span of the bridges, which increases the number of abutments and wing walls, while the heavier earthwork entails in many cases greater height, and therefore a larger quantity of masonry in the abutments and wing walls.

9. The average cost of the *Culverts* per mile is Rs. 2,569·20 upon the Northern Railway, Rs. 7,583 upon the Kelani Valley line, and Rs. 3,818·80 upon the Uda Pussellawa line, the respective numbers of these structures, including pipe drains, per mile being 3·4, 9·0, and 11·5 on the three lines. The number of the culverts required is of course governed by the nature of the country traversed, and this per mile is more than two and a half times on the Kelani Valley and nearly three times on the Uda Pussellawa more than on the Northern Railway. The average cost of each culvert on the Kelani Valley line is much heavier than on the Northern Railway; this, no doubt, is partly due to difficulties in the foundations and partly to the heavier earthworks, which in the case of covered culverts would increase their length. On the Uda Pussellawa Railway the cost is influenced by the fact that in many cases it sufficed, instead of building altogether new culverts, merely to lengthen the existing ones under the public road.

10. *Retaining Walls* are not required on the Kelani Valley or Northern Railways, and on the Uda Pussellawa line they are rendered necessary by the precipitous sidelong nature of the ground traversed ; their estimated cost on that railway is Rs. 649·20 per mile.

11. *Permanent Way and Switches and Crossings.*—The estimated amounts appearing under these items in Schedule No. 1 of the estimate cover all local expenditure connected with the work after delivery of the materials at the terminus of the line, including carriage along it, and they are for the Northern Railway Rs. 5,849·20 per mile, for the Kelani Valley Railway Rs. 6,771 per mile, and for the Uda Pussellawa Railway Rs. 3,963·20 per mile. The cost of the transport of the materials along the line largely affects this item. Upon the Kelani Valley Railway Mr. Phillimore states that in order to save time it was deemed advisable, instead of waiting for the completion of the Sitawaka-ganga bridge, which would have rendered locomotive traction available, to transport the materials for laying the last 11 miles of the line by trolley and cart. Mr. Oliver has also lately informed us that his estimate for this item on the Uda Pussellawa line will also be exceeded, as for a similar reason, owing to the delay in the acquisition of the land, on the first 2 miles of the line it was necessary to transport the materials by cart from Nanu-oya. Had it not been for these disturbing elements the cost would have been highest on the Northern Railway, for other things being equal, the longer the line the more it costs to transport the materials along it, and on that line the sleepers are longer and cost more to handle, and the quantity of ballast per mile is greater than on the other narrow-gauge lines.

12. The item *Fencing* only appears in the Northern Railway estimate, and its mileage cost is Rs. 315·30.

13. For the smaller items of *Level Crossings*, *Metalling Roads*, and *Miscellaneous Works* the respective estimated rates per mile are as follows, viz., on the Northern Railway Rs. 238·60, Rs. 342·50, and Rs. 878·40, and upon the Uda Pussellawa Railway Rs. 311·70, Rs. 1,439·30, and Rs. 727·20. On the Kelani Valley line the estimated cost of level crossings and metalling and gravelling roads taken together is Rs. 1,083 per mile, and that of miscellaneous works Rs. 823 per mile.

14. The cost of level crossings is almost wholly governed by the number and class of the roads crossed by the railway, and is naturally higher on the Uda Pussellawa Railway, which throughout most of its length runs along and frequently crosses and re-crosses the main road, than on the Northern Railway. The cost of metalling roads is influenced not only by the number of level crossings and the length of their approaches, but also by the number of road diversions and their length, as well as by the number of stations, the approaches to which have of course to be metalled. Miscellaneous works include the provision of accommodation for the working staff of the line, &c., and their cost is highest on the Northern Railway in consequence of a sum of Rs. 40,000 being set down under this head for the erection of workshops at Kankesanturai.

15. *Stations.*—The estimated cost of these per mile is as follows: on the Northern Railway Rs. 2,061·08, on the Kelani Valley Railway Rs. 6,833, and on the Uda Pussellawa Railway Rs. 5445·60. Mr. Oliver has lately informed us that on the latter line the total cost of this item will exceed the estimate by Rs. 40,000, largely in consequence of the adoption by the order of the Government of special designs for the station buildings at Nuwara Eliya. This amount equals Rs. 2,077·90 per mile, and it will raise the mileage cost of the stations on the Uda Pussellawa Railway to Rs. 7,523·50. The cost of the stations is naturally governed not only by their type, but also by their average distance apart; this upon the Northern Railway is about 10 miles, on the Kelani Valley line about 4 miles, and upon the Uda Pussellawa line about $6\frac{2}{5}$ miles. Besides this, the terminal works, both at Maradana Junction and Nanu-oya, will be naturally on a much larger scale, and therefore more costly, owing to the differences in gauges, than they are at Kurunegala, where no difference in gauge exists.

16. We have now dealt in detail with each item included in Schedule No. 1 of the estimate except *Contingencies*, which in the case of each railway is merely an allowance on the sum of the other items, and amounts per mile to Rs. 1,984·70 for the Northern Railway, Rs. 4,180 for the Kelani Valley line, and Rs. 2,862·20 for the Uda Pussellawa line.

17. Considering in the same way the works comprised in Schedule No. 2 of the estimate, the mileage cost of the first item, viz., *Telegraph*, per mile of railway is Rs. 400 upon the Northern Railway, Rs. 345·40 upon the Uda Pussellawa line, and Rs. 896 upon the Kelani Valley line. The lower estimate for this item on the Uda Pussellawa line as compared with that for the Northern Railway, is due not only to a slightly lower mileage rate having been originally entered, but also, owing to the former line being in places very circuitous, it has no doubt been possible to adopt a different and shorter route for the wire than that followed by the railway. Mr. Phillimore has in his estimate for the Kelani Valley line, dated the 28th October, 1901 (see Sessional Paper XLV. of 1901, page 3), stated that the estimate for this item was furnished by the Postmaster-General, but gives no reasons to account for its high cost, which, however, we think may possibly be partly due to the adoption of some special and more costly wire to resist the corrosive effects of the hot damp climate of the Kelani Valley than the wire ordinarily used.

18. *Land and Compensation.*—The cost of this per mile varies from Rs. 861·02 on the Northern Railway to Rs. 7,188 on the Kelani Valley line and Rs. 3,029·10 on the Uda Pussellawa line. Mr. Oliver has lately informed us that the cost of this item on the last-mentioned line will be increased by Rs. 136,000, equal to Rs. 7,065 per mile; this will raise the total mileage cost to Rs. 10,094·10. The amount paid for land and compensation is a matter beyond the control of the Engineers, and we, in dealing with estimates, are bound to accept the figures given to us. The cost is almost entirely governed by the nature and quantity of the lands in private hands, the products grown on such lands, and by the claims for severance, &c., admitted and paid, and it would seem that even when estimates for this item have been framed after consultation by the Engineers in the Colony with the Government Agents and others best qualified to judge, as we believe the estimates for these lines were, they are nevertheless frequently exceeded. In the case of the Uda Pussellawa line when framing his estimate, see paragraph 25 of his letter to the Hon. the Colonial Secretary, No. 158 of the 30th August, 1900 (see Sessional Paper VII. of 1901), it is evident Mr. Oliver wrote with hesitation, and we understand that the cost of this item on the Uda Pussellawa line has been increased by the acquisition at Nuwara Eliya of land, by order of the Government, which was not required for the purposes of the railway, but the cost of which has been defrayed out of the railway funds.

19. *Engineering and Administration.* — Our estimates for this covered only expenditure incurred during the construction of the line, but under the instructions of the Government the cost of the survey and preliminary charges prior to the beginning of construction have been included in the estimates for this item; these expenses in the case of the Northern Railway have amounted to Rs. 135,786·74, and in the case of the Kelani Valley and Uda Pussellawa lines to Rs. 109,798 and

Rs. 47,237·02, respectively. Including these amounts, the estimated cost of this item upon the Northern Railway will be Rs. 2,829·30 per mile, on the Kelani Valley line Rs. 5,938 per mile, and on the Uda Pussellawa line Rs. 5,051·30 per mile; excluding these sums the amounts to cover the cost of Engineering, &c., during construction only would have been Rs. 2,144·30, Rs. 3,650, and Rs. 2,597·40 per mile upon the Northern, the Kelani Valley, and the Uda Pussellawa Railways, respectively. On comparatively short lines through difficult country the cost per mile for supervision will naturally be higher than on a long line through easy country.

20. The cost of the *Manufacture, Freight, &c., of the Bridge and Culvert Superstructures, Piers, &c.*, exported from this country was estimated at the following rates per mile, viz., upon the Northern Railway Rs. 3,043·80, upon the Kelani Valley Railway Rs. 5,513, and upon the Uda Pussellawa line Rs. 765·60. These amounts are naturally influenced by the number and size of the structures for which steel or ironwork is required, and also by the market prices ruling at the time when the estimates were framed or the supplies purchased.

21. The cost of the *Manufacture, Freight, &c., of the Permanent Way Rails and Fastenings* per mile upon the Northern, the Kelani Valley, and the Uda Pussellawa lines, respectively, was estimated at Rs. 10,521, Rs. 11,985, and Rs. 11,465·20. These rates are influenced by the length of permanent way in sidings for which provision is made in the estimate (this is 6 miles on the Northern Railway, equal to a little more than 3 per cent. of its length; 3½ miles on the Kelani Valley line, equal to nearly 7·24 per cent. of its length, excluding the additional sidings at Avisawella mentioned by Mr. Phillimore in his latest estimate, of which we have no particulars; and 67·10 chains on the Uda Pussellawa line, equal to 4·37 per cent. of its length) as well as also by the market prices of the materials ruling when the estimates were prepared or the supplies purchased.

22. *Creosoted Sleepers*, estimated to cost Rs. 4·25 each delivered, were used on the Northern Railway, and Karri sleepers, estimated to cost respectively delivered Rs. 2·62 and Rs. 2·49 each, were used upon the Uda Pussellawa and Kelani Valley Railways, the mileage cost, which is influenced by the length of sidings to be laid, being Rs. 8,757 upon the Northern line, Rs. 5,688 upon the Kelani Valley, and Rs. 5,551·30 upon the Uda Pussellawa Railway.

23. The cost of the manufacture of the *Switches and Crossings* per mile of railway is estimated to be Rs. 189 on the Northern line, Rs. 709 on the Kelani Valley, and Rs. 669·60 on the Uda Pussellawa line; the number required is of course governed by the number, size, and complexity of the station yards.

24. *Rolling Stock.*—The estimate per mile for this item is Rs. 5,220 upon the Northern Railway, Rs. 14,771 per mile upon the Kelani Valley, and Rs. 8,504 upon the Uda Pussellawa Railway. Mr. Oliver has lately informed us that upon the latter railway the estimate for this item will be increased by Rs. 61,000; this will raise its mileage cost to Rs. 11,672·80. This increase is entirely due to the indents received from the Colony describing a widely different and much more costly stock than that originally contemplated when the estimate was framed, and to which we invited your attention at the time.

25. The *Contingencies* upon works included in Schedule No. 2 of the estimate, which are taken at 5 per cent. in the case of the Northern Railway and 10 per cent. on the Uda Pussellawa line represent mileage rates of Rs. 1,591 and Rs. 3,190·50 respectively. The estimate for the Uda Pussellawa line is further increased by the sum of Rs. 6,627·34, equal to Rs. 344·30 per mile, spent in extraneous works, which we understand represent part of the cost of a new carriage shop at Colombo, charged by the order of the Government to this railway, but not included in the estimate. In the case of the Kelani Valley Railway Mr. Phillimore has entered in his last estimate the sum of Rs. 65,000 for contingencies, and this is equal to Rs. 1,355 per mile of railway.

For convenience of reference we repeat the figures given above in a tabular form:—

Description.	The Northern Railway.	The Kelani Valley Railway.	The Uda Pussellawa Railway.
	M.	M. C.	M. C.
Length of line	190·2	... 48 2·80*	... 19 20·02†
Schedule No. 1, Mileage cost.	Rs. c.	Rs. c.	Rs. c.
Felling trees and clearing land ...	—	... 393 0	... —
Earthwork	4,635 80	... 13,688 0	... 10,409·50
Bridges	2,956 70	... 16,833 0	... 1,857 70
Culverts	2,569 20	... 7,583 0	... 3,818 80
Retaining walls	—	... —	... 649 20
Permanent way and switches and crossings	5,849 20	... 6,771 0	... 3,963 20
Fencing	315 30	... —	... —
Level crossings	238 60	... }	... 311 70
Metalling, &c., roads ...	342 50	... } 1,083 0	} ... 1,439 30
Miscellaneous works ...	878 40	... 823 0	... 727 20
Stations	2,061 80	... 6,833 0	... 7,523 50
Contingencies on Schedule No. 1 ...	1,984 70	... 4,180 0	... 2,862 20
Schedule No. 2, Mileage cost.			
Telegraph	400 0	... 896 0	... 345 40
Land and compensation ...	861 20	... 7,188 0	... 10,094 10
Engineering and administration ...	2,829 30	... 5,938 0	... 5,051 30
Bridge and culvert superstructures, &c., manufacture, &c., of ...	3,043 80	... 5,513 0	... 765 60
Permanent way materials, manufacture, &c., of	10,521 0	... 11,985 0	... 11,465 20
Sleepers	8,757 0	... 5,688 0	... 5,551 30
Switches and crossings, manufacture, &c., of	189 0	... 709 0	... 669 60
Rolling stock	5,220 0	... 14,771 0	... 11,672 80
Contingencies on Schedule No. 2...	1,591 0	... 1,355 0	... 3,190 50
Extraneous items... ...	—	... —	... 344 30
Total ...	55,244 50	112,230 0	82,712 40

* Taken as 48 miles in calculations.

† Taken as 19¼ miles in calculations.

26. We have in the preceding paragraphs of this report, by comparing the estimated mileage cost of each item of the estimates for the three railways, shown why the cost of the Kelani Valley and Uda Pussellawa lines is so much in excess of that of the Northern Railway, and from the figures it will be evident that the main reason is due to the relative difficulties of the country traversed by the respective lines, to the exigencies of the traffic as affecting the number of stations, length of sidings, the quantity and class of rolling stock required, and to other causes quite beyond any question of gauge or the control of either ourselves or the Engineers in the Colony, and we trust it will be clear both to you and to the Government that no comparison can be justly made between the mileage cost of a railway running for the most part of its length through a comparatively dry district, where most of the land is in the possession of the Crown and is therefore available without payment, where the rock and earthwork and bridging, including culverts, are light, where the stations are generally but small ones and are far apart, conditions obtaining on the Northern Railway, with the cost of railways like the Kelani Valley and Uda Pussellawa lines, where the opposite of each of these conditions exists.

27. There is a further question raised in the Hon. the Colonial Secretary's letter, namely, that of the gradual increase in the estimates beyond those originally framed for the Kelani Valley and Uda Pussellawa Railways, which, although touched upon in the previous part of this report, may be held to require further elucidation.

28. It is true that the late Mr. Mackintosh's original estimate for the Uda Pussellawa Railway was at the rate of Rs. 47,164 per mile, and in our report to your address of the 2nd May, 1898, we pointed out in considerable detail the objections to the trace he proposed and the points in which his estimate required amendment and additions, raising the mileage cost of the line to Rs. 61,879; subsequently the line was re-surveyed by Mr. Oliver, and his estimate as given in his letter No. 158 of the 30th August, 1900, to the Hon. the Colonial Secretary, still further raised the amount to Rs. 66,579·48 per mile. Mr. Oliver explained in the 10th and 13th paragraphs of that letter that the main reasons entailing this increase in the estimate were the following, viz., that "where the line runs at the side of the road provision has been made for widening the road where necessary, in order that in all cases there shall be a clear width of 10 ft. clear of the railway carriage for the passage of road vehicles. This was apparently promised to the Uda Pussellawa Planters' Association at a meeting of the Hill Tramways Commission," and Mr. Oliver found "that it was generally expected in the district that ample room will be left for carriages to pass the trains." Mr. Oliver further stated that "this provision adds a considerable sum to the estimate, the items Earthwork, Bridges, Culverts, Metalling Roads, and Land and Compensation being very much swelled thereby." He further remarked that the inclusion of the electric telegraph and higher rates for material to be imported owing to the rise in market prices added to the excess above our first estimate. In our report to your address of the 7th December, 1900, we accepted Mr. Oliver's estimate subject to a slight addition of Rs. 19,680 to cover the increased cost of imported materials, the price for which had risen since Mr. Oliver's estimate was framed; this increased the estimated mileage cost of the line to Rs. 57,601·81. The subsequent additions to the items of Stations, Land, and Rolling Stock, and the inclusion in the estimate of extraneous works, and of the cost of preliminary charges, &c., prior to the commencement of construction mentioned in paragraphs 15, 18, 19, 24, and 25 of this report, amounting in the aggregate to Rs. 290,864·36, have raised the total estimated mileage cost of this railway to Rs. 82,712·40.

29. The first estimate for the Kelani Valley Railway, which was also framed by the late Mr. P. A. Mackintosh, and is given in his letter No. 7 of the 4th July, 1897, to the Hon. the Colonial Secretary, was at the rate of Rs. 57,545·99 per mile; this was for a line of railway to Atulugama, with extensions along the roads in the form of tramways to Yatiyantota and Ruanwella, the total length being 50 miles. The rails were to weigh 36 lb. per yard. He proposed what we considered inadequate formation, widths, and slopes, insufficient ballast and waterway; and the formation, even of the main line, was not wholly above flood level, while no attempt was made to keep the formation of the tramways which were proposed to run along the existing roads above it. The curves were very sharp; 2·06 chains was the smallest radius, the aggregate length being about $2\frac{1}{2}$ miles, while nearly 6 miles of the line was on curves of less than 4 chains (264 ft.) in radius; gradients as steep as 1 in 100 were used for an aggregate length of $21\frac{1}{10}$ miles even on the sharpest curves. In reporting to you on the 25th March, 1898, on this project, we pointed out these defects at length, laying special stress on the difficulty of accurately determining the waterway required owing to the nature of the country traversed, and indicating certain places where it was manifestly inadequate, recommending the increase in weight of the rails to $46\frac{1}{2}$ lb. per yard, remarking that this from the outset would be attended with economy in working, which would become more manifest when the life of the rails and maintenance charges were taken into account. We also recommended broader formation for the embankments, flatter slopes to the cuttings, and an increased depth for the ballast, as well as the abandonment of the mixed gauge proposed at Maradana Junction. In that report we estimated that the improvements we recommended would increase the mileage cost of the railway to Rs. 67,904.

30. With his letter No. 177 of the 25th July, 1899, Mr. Mackintosh submitted a second estimate for this railway, the line in the meantime having been re-surveyed, and many of the defects appearing in the first survey and estimate having been removed. This line had its terminus at Vendella, and was 46 miles 48 chains in length, the proposed extensions to Ruanwella and Yatiyantota having been left in abeyance, the estimate for this line, which provided under the instructions of Government for upstairs dwellings over the station buildings for the station masters and clerks, the object being the better preservation of their health, the district being malarious, was at the rate of Rs. 78,810·64 per mile. In reporting to you on the 19th October, 1899, upon this estimate we were compelled for the reasons we then gave to make certain additions to the cost of earthwork, bridges, permanent way, level crossings, metalling roads, stations, contingencies, both to Schedules 1 and 2, manufacture, &c., of bridge and culvert superstructures, and manufacture, &c., of steel rails, the effect of which was to raise the mileage rate to Rs. 86,583·27.

31. Subsequently the trace was again altered, Vendella being abandoned as a terminal station, and the line being extended from a point near Atulugama to a point opposite Yatiyantota, a bridge over the Kelani-ganga being provided for at that place to give access to the station, Mr. Phillimore's revised estimate for the whole line, as given in his letter to the Hon. the Colonial Secretary, No. 174 of the 28th October, 1901, being at the rate of Rs. 99,583 per mile, and in reporting to you on that estimate on the 20th January, 1902, we stated that it should be adopted. In

submitting this estimate Mr. Phillimore dealt fully, item by item, with the causes rendering it so high, and as he has since in his notes of the 30th May, 1903, submitted to His Excellency the Governor, dealt with the same question, we feel that we can add nothing material to what he has written on the subject, coupled with what we have previously stated in our report of the 20th January, 1902.

32. It, however, now remains for us to comment upon Mr. Phillimore's latest estimate, namely, that given in his letter to the Hon. the Colonial Secretary, No. 79 of the 9th June last, the result of which is to again raise the probable cost of the Kelani Valley Railway from Rs. 99,583 to Rs. 112,230 per mile.

33. Mr. Phillimore states that, as compared with his estimate of the 28th October, 1901 (published as Sessional Paper XLV. of 1901), there is an increase in the items included in Schedule No. 1 of Rs. 585,679, thus raising its total to Rs. 2,792,962 and a decrease of Rs. 28,417 in the total of the items included in Schedule No. 2, which now stands at Rs. 2,594,100. The probable cost of the whole line, the exact length of which is 48 miles 2·80 chains as now estimated, is therefore Rs. 5,387,062.

34. The increase in Schedule No. 1 is due to increases in all the items, and with regard to *A*, *Felling Trees and Clearing Land*, for which Rs. 18,800, or Rs. 1,196 in excess of the previous estimate, is set down, Mr. Phillimore states the increase is due to the felling and clearing being heavier at the Yatiyantota end of the line than it was on the line cleared previously to the preparation of his estimate of 1901.

35. The estimate for *B*, *Earthwork* now amounts to Rs. 657,000, or Rs. 121,007 above Mr. Phillimore's previous estimate; this increase, he explains, is partly due to the larger quantity of rock found, namely, 260,374 cubic yards, principally, we understand, on the last 2 miles of the line, beyond the quantity of 206,653 cubic yards estimated, and partly owing to his having in error set down too low a rate for the earth excavation in his previous estimate through not having given sufficient consideration to the contingencies of waste, settlement, maintenance, turfing, slopes, &c., attendant on this class of work. Our experience of the great irregularity of the strata usually met with in Ceylon enables us to support Mr. Phillimore's statement that it is impossible to predict with anything like accuracy the amount of rock likely to be met with in any cutting, as surface indications are often misleading, and this irregularity renders trial pits or borings of little practical value. While we noticed that a low rate had been set down for the earth excavation in his previous estimate, we did not alter it, as we considered, much of the work having then been done, that his experience justified its entry.

36. With reference to the excesses of Rs. 229,623 and Rs. 92,289 in the items of *C*, *Bridges*, and *D*, *Culverts*, respectively, Mr. Phillimore explains that in both cases the increases are partly due to the foundations having been more difficult and costly on the last 15 miles of the line than they had been in the case of the bridges and culverts built when his previous estimate was prepared; in the case of the culverts, the addition of 25 of these structures and 21 pipe drains, which experience had shown to be required, also contributed to swell the cost. We have in our reports upon the estimates for this railway laid special stress not only on the importance of providing adequate waterway, but also to the difficulty, owing to the line traversing country liable to be flooded by the Kelani and Sitawaka-gangas, of determining what should be afforded.

37. In the items of *E and F*, *Permanent Way* and *Switches and Crossings*, the previous estimate is exceeded by Rs. 108,202; part of this increase is accounted for by expenditure in transporting permanent way materials by cart in order to avoid the delay which would have occurred had Mr. Phillimore waited until the Sitawaka-ganga bridge was erected, and the need for this could perhaps not have been foreseen when the previous estimate was made, and part is due to the cost of the work remaining to be done having been under-estimated.

38. The excess above Mr. Phillimore's previous estimate of Rs. 8,981 in the items *G* and *H*, *Level Crossings* and *Metalling Roads*, is, he states, due to the length of the approach roads to the stations being greater than that originally provided.

39. The excess of Rs. 6,900 in the estimate for *I*, *Stations*, is almost entirely accounted for by the sanction of the Government on the 1st September, 1902, to a supplementary estimate of Rs. 6,561·40 to cover the cost of furniture and unconsumable stores for the stations. An additional turntable has been provided at Avisawella, and lamp-posts, not previously estimated for, have been furnished at all stations at the request of the General Manager of the Railway. Had it not been for these additions there would have been a saving instead of an increase in the estimate for this item.

40. In *J*, *Miscellaneous Works*, the excess above Mr. Phillimore's previous estimate is Rs. 17,481, and this he states is partly due to each set of quarters for the platelaying coolies comprising, in accordance with the request of the General Manager of the Railway, seven instead of four rooms, as originally estimated for, for which we presume that the sanction of the Government was obtained, and partly to the construction under the authority of the Government conveyed to him on the 9th December, 1902, of an additional residence for a foreman platelayer at Avisawella.

41. The amount under the heading of *K*, *Contingencies*, to Schedule No. 1 of the estimate remains at Rs. 200,662, the same amount that appeared in Mr. Phillimore's previous estimate.

42. In regard to the items included in Schedule No. 2 of the estimate, we observe that the increases above the previous estimate, in some cases large ones, in *L*, *Electric Telegraph*; *N*, *Engineering and Administration*; *O* (*a*), *Wrought and Cast Iron in Well Curbs and Cylinders*; *O* (*b*), *Steel in Culvert Girders*; *P*, *Q*, *and R*, *Permanent Way Materials and Switches and Crossings*; *S*, *Sleepers*; and *T*. *Rolling Stock*, are more than counterbalanced by savings in the items of *M*, *Land and Compensation*; *O*, *Steel*, *&c.*, *in Bridge Girders*; and *U*, *Contingencies*, and as Mr. Phillimore has dealt in detail in his estimate with the causes to which the differences from his previous estimate in each case are due, it does not seem to us essential to again state them.

43. It is naturally disappointing to find that so large an increase has to be made to Mr. Phillimore's estimate framed as lately as October, 1901. From the able and painstaking manner in which he has dealt with all questions affecting his work in Ceylon, evidenced by his official letters which you always see, and from his knowledge of the cost of the works already executed on a portion of the Kelani Valley Railway at the time his estimate was made, we were certainly unprepared for such a large increase in actual cost, as his prices, except perhaps for earthwork, seemed to us at the time to be fair and adequate. It must, however, be remembered that the construction of the latter portion of the line has disclosed unexpected difficulties, particularly in the foundations of the bridges and waterways generally, which could hardly have been anticipated by him, while the percentage of rock has

also been very high and much in excess of that found in the first portion of the line. We see no reason, however, at present to apprehend that his final estimate will be exceeded.

44. It would appear that the Government of Ceylon have agreed to the appointment of a Commission of Inquiry, we presume, to investigate the reasons why the ultimate cost of both the Uda Pussellawa and Kelani Valley Railways will be so high, and so largely in excess of the original estimates; and if, as we suppose, you will transmit a copy of this report to Ceylon, we trust that it, coupled with the previous estimates and our reports on them to which we have referred, may be of some service to the Commission as showing that this increase of cost beyond that entailed by improving the trace of both railways, the use of heavier rails, the adoption of sufficient sections and slopes for the earthwork, and the additional earthwork necessary to keep the Kelani Valley Railway above flood level, all of which, we submit, were essential for the stability and economical working of the lines, especially, in view of the sharp curves and the gradients used, was due to the waterways required, in the first instance, having been much under-estimated, to a larger quantity of rock having been found in the cuttings than was expected, to large excesses in the cost of the land, the defrayment of charges from the railway funds not originally provided for, to more costly stations having been built under the instructions or with the approval of the Government, and to the indents from the Colony, in the case of the Uda Pussellawa Railway, for rolling stock calling for a much more costly class of vehicle than that originally proposed for this line, as well as to the extra expense incurred in providing for a clear width of road of 10 feet for the passage of ordinary vehicles.

45. We venture to hope also that the matters to be submitted for inquiry by this Commission may embrace not only the cost of the Kelani Valley and Uda Pussellawa Railways, but also their suitability for dealing with the traffic likely to be carried by them. No part of the Uda Pussellawa line is yet finished, and therefore no figures relating to it are available; but upon the Kelani Valley line, the first section of which to Avisawella was opened at the middle of September last, the traffic up to the end of March was considerable, and as far as goods were concerned showed an encouraging monthly increase. It is, moreover, anticipated that when the line is opened to Yatiyantota there will be a further large increase in goods traffic, while the traffic would be still heavier were the Ratnapura extension constructed. The working expenses are, however, very high, having been during the last three and a half months of 1902 89½ per cent. of the gross receipts. No doubt, however, any increase in traffic will improve this proportion, but it must be remembered that the use of unfavourable curves and gradients, while diminishing the capital cost, must always result in heavy working expenses; and the converse is equally true. Had, therefore, this line been built with the frequent exceedingly sharp curves first proposed, we think it not improbable that the whole of the receipts up to the present might have been absorbed in working expenses, a result which, had it occurred, would have been most disappointing.

46. We trust, therefore, that the Colonial Government will recognize that if any departure has, except so far as regards the weight of rails, been made from the type of railway indicated in the 27th paragraph of His Excellency the Governor's despatch to the Right Hon. the Secretary of State of the 6th May, 1897, it has been rendered obligatory by the nature of the country traversed by the lines, or has been due to causes alike beyond our control and that of the Engineering staff in the Colony.

47. From the 6th paragraph of the Hon. the Colonial Secretary's letter we note that the Government do not consider it at all probable that an extension of the Kelani Valley Railway to Ratnapura would result in any traffic being diverted from the existing main line. In considering the proposals for this extension, this matter appeared to us to be one which should be submitted to the Government.

We have, &c.,
GREGORY, EYLES, & WARING.
Consulting Engineers.

XXXVI.—1903.

VILLAGE COMMUNITIES.

A STATEMENT

SHOWING

THE DISTRICTS, PRESIDENTS, THEIR SALARIES AND STAFFS, AND THE NUMBER AND NATURE OF THE CASES DISPOSED OF DURING 1902.

Ordered by His Excellency the Governor to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 10 cents.

1903.

VILLAGE COMMUNITIES.

RETURN showing the Names of Districts, Presidents, &c., and the Number of Cases instituted, decided, and in Appeal, during 1902.

Districts.	Presidents.	Salaries.	Staff.	Cost of Staff per Annum.	Pending on January 1, 1902.		Instituted during 1902.		Amicable Settlements under Section 23 included under head Decisions.		Decisions.											Appeals.				Pending on December 31, 1902.	
											Civil.		Criminal.									To Govt. Agent.		From G. A. to Governor in Executive Council.			
					Civil.	Criminal.	Civil.	Criminal.	Civil.	Criminal.	Money.	Land.	Breach of V. C. Rules.	Irrigation.	Assault.	Malicious Injury.	Cattle Trespass.	Maintenance.	Theft.	Public Nuisance.	Vaccination.	Confirmed.	Set Aside.	Confirmed.	Set Aside.	Civil.	Criminal.
Western Province.		Rs.		Rs.																								
Alutkuru Korale South.																												
Gampaha ...	This Tribunal is in charge of President, Siyane korale west	—	1 Sweeper	30	—	—	81	194	30	89	81	—	100	3	52	4	—	—	34	—	—	6	5	—	1	—	1
Kanuwana ...	This Tribunal is in charge of President, Alutkuru korale north	—	1 Sweeper	30	—	—	126	262	14	59	125	—	112	3	71	8	11	—	53	—	—	2	1	—	—	1	4
Village Committee: Wattala ... Ambatalenpahala Kanuwana ...	John Abeyesekara, Mudaliyar	—	—	—	—	—	—	19	—	—	—	—	19	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hewagam Korale.																												
Hanwella ...	A. J. Seneviratne ...	1,650	1 Clerk, 2 Peons, and 1 Sweeper ...	600	3	19	278	504	7	—	278	—	246	5	120	26	—	—	113	—	—	55	17	9	—	3	13
Aturugiriya ...					3	23	191	433	7	1	181	—	157	5	119	23	1	—	135	—	—	42	12	11	1	13	16
Kaduwela ...					—	13	112	252	3	1	111	—	135	—	61	12	—	—	50	—	—	10	7	—	—	1	7
Salpiti Korale.																												
Gangodawila ...	D. D. H. Perera, Mudaliyar	1,760	1 Clerk and 2 Peons	540	—	—	258	937	59	305	258	—	405	—	273	50	—	—	209	—	—	44	6	6	—	—	—
Homantara ...					—	—	266	660	61	265	266	—	368	—	98	50	—	—	144	—	—	31	3	5	—	—	—
Siyane Korale West.																												
Mahara ...	F. A. Wijeyesekara ...	1,980	1 Clerk and 2 Peons	540	—	—	145	546	57	203	144	1	239	1	176	9	—	—	121	—	—	13	4	3	2	—	—
Henaratgoda ...					—	—	296	770	122	303	294	1	301	3	221	13	—	—	229	—	—	25	2	1	—	1	4
Negombo.																												
Minuwangoda ...	J. E. de Silva, Muhandiram	1,760	1 Clerk, 1 Messenger, and 1 Sweeper ...	504	—	—	324	755	18	114	322	—	259	11	184	50	15	—	233	—	—	19	4	3	—	2	3
Katana ...					—	6	160	284	7	41	159	—	101	3	82	15	7	—	79	—	—	10	2	2	—	1	3
Village Committee: Hapitigam korale	L. A. Dasanayaka, Mudaliyar, Chairman	—	1 Clerk and 1 Peon	300	—	2	—	292	—	137	—	—	291	—	—	—	—	—	—	—	—	—	—	—	—	—	3
Kalutara.																												
Village Committee: Pasdun korale west	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Central Province.																												
Kandy.																												
Udunuwara ...	L. B. Ranaraja ...	1,452	1 Clerk at Rs. 240, 1 Peon at Rs. 120, and 1 Watcher at Rs. 30 per annum	390	—	—	410	629	50	136	325	85	456	—	82	22	43	—	26	—	—	43	4	4	—	—	—
Yatinuwara ...	Do. ...	360	1 Clerk at Rs. 240, 1 Peon at Rs. 120, and 1 Watcher at Rs. 30 per annum	390	—	—	404	454	29	50	392	12	299	—	44	65	12	—	34	—	—	37	4	3	1	—	—
Tumpane ...	Do. ...	—	1 Clerk at Rs. 180, 1 Peon at Rs. 60, and 2 Watchers at Rs. 60 each per annum	360	—	—	282	411	19	39	270	12	221	—	38	98	20	—	34	—	—	28	1	—	—	—	—

Districts.	Presidents	Salaries.	Staff.	Cost of Staff per Annum.	Pending on January 1, 1902.		Instituted during 1902.		Amicable Settlements under Section 23 included under head Decisions.		Decisions.											Appeals.				Pending on December 31, 1902.	
											Civil.		Criminal.									To Govt. Agent.		From G. A. to Governor in Executive Council.			
					Civil.	Criminal.	Civil.	Criminal.	Civil.	Criminal.	Money.	Land.	Breach of V. C. Rules.	Irrigation.	Assault.	Malicious Injury.	Cattle Trespass.	Maintenance.	Theft.	Public Nuisance.	Vaccination.	Confirmed.	Set Aside.	Confirmed.	Set Aside.	Civil.	Criminal.
		Rs.		Rs.																								
Harispattu ...	J. E. P. Kehelpannala ...	—	1 Clerk at Rs. 180, 1 Peon at Rs. 60, and 1 Watcher at Rs. 30 per annum	270	—	—	577	994	63	147	553	24	721	—	81	137	17	—	38	—	—	41	7	2	—	—	—
Pata Dumbara ...	Do. ...	1,650	2 Clerks, 1 at Rs. 240 and 1 at Rs. 120; 2 Peons at Rs. 90 each; and 1 Watcher at Rs. 36 per annum	576	—	—	750	1708	64	319	701	49	1152	—	249	131	36	—	140	—	—	68	8	5	—	—	—
Uda Dumbara ...	T. B. Rambukwela ...	240	1 Clerk at Rs. 240 and 1 Peon at Rs. 120 per annum	360	—	3	270	398	44	59	269	—	231	6	65	12	51	—	31	—	—	9	1	1	—	1	5
Pata Hewaheta ...	L. B. Yatawara ...	—	1 Clerk at Rs. 180 per annum ...	180	—	51	—	482	—	103	—	—	449	—	—	—	66	—	—	—	—	3	—	—	—	—	18
Udapalata ...	T. B. Yatawara ...	—	1 Clerk at Rs. 240 per annum. ...	240	1	14	27	463	20	346	26	—	415	41	—	—	1	—	—	—	—	6	—	—	—	2	20
Uda Bulatgama ...	A. J. W. Marambe ...	—	1 Clerk at Rs. 120 per annum ...	60	—	9	—	175	—	61	—	—	184	—	—	—	—	—	—	—	—	1	—	—	—	—	—
Matale.																												
Matale north ...	T. B. Tenne	1,320	1 Clerk at Rs. 240, 1 Peon at Rs. 150, 1 Watcher at Rs. 30, 1 Watcher at Rs. 24, 2 Watchers at Rs. 18 each, and 1 Watcher at Rs. 12 per annum	492	—	—	427	662	38	81	390	37	448	—	65	11	102	—	35	—	—	38	4	2	—	—	1
Matale east ...	T. B. Hulangamuwe ...	1,320	1 Clerk at Rs. 240, 1 Peon at Rs. 150, 5 Watchers at Rs. 12 each, 1 Peon at Rs. 90, and 1 Watcher at Rs. 18 per annum	558	1	7	390	489	2	10	363	18	312	—	82	2	42	—	43	—	—	43	4	1	—	10	15
Matale south ...	M. Keppitipola ...	—	1 Clerk at Rs. 180 and 1 Peon at Rs. 90 per annum	270	—	8	—	382	—	78	—	—	373	—	—	—	—	—	—	—	—	14	1	—	—	—	17
Nuwara Eliya.																												
Uda Hewaheta ...	A. B. Galagoda ...	720	1 Clerk at Rs. 180, 1 Bookbinder at Rs. 30, and 1 Peon at Rs. 108 per annum	318	37	16	660	401	27	26	649	31	247	—	106	5	8	—	46	—	—	24	1	2	—	17	5
Walapane ...	Do. ...	—	1 Clerk at Rs. 180, 1 Bookbinder at Rs. 30, and 1 Peon at Rs. 60 per annum	270	23	12	291	231	10	27	263	43	121	—	57	3	13	—	39	—	—	30	3	—	—	8	10
Kotmale ...	K. B. Welegedara ...	200	1 Clerk at Rs. 180 per annum ...	180	—	—	79	202	21	62	76	—	135	—	39	5	—	—	16	—	—	5	2	—	—	3	7
NORTHERN PROVINCE.																												
Mullaittivu.																												
Vavuniya north and south, Panankamam, and Metkumulai	C. Chellaiyah ...	1,650	2 Clerks, 1 at Rs. 240 and 1 at Rs. 180; 1 Peon at Rs. 90 per annum	510	10	2	197	101	—	3	202	1	1	—	46	5	30	—	15	2	—	9	2	—	1	4	4
Delft east, middle, and west	F. R. Chandrasegra (acting)	880	1 Clerk (temporary) at Rs. 150 ...	150	—	—	105	56	15	14	86	19	14	—	18	6	—	1	17	—	—	—	—	—	—	—	—
SOUTHERN PROVINCE.																												
Galle.																												
Bentota-Walallawiti korale	T. R. Sumanasekera ...	1,200*	—	600	29	7	1430	992	223	243	1417	5	509	3	238	36	79	—	114	—	—	111	16	36	6	37	20
Gangaboda and Hinidum pattus	T. Dunuwille	{ 1,000† / — ‡ }	—	456	{ 6 / 6	3 / 6	359 / 73	285 / 59	10 / 3	44 / 15	350 / 76	—	231 / 54	—	28 / 7	3 / —	— / —	—	18 / 2	—	—	52 / 5	11 / 2	3 / 1	1 / 1	15 / 3	8 / 2
Matara.																												
Gangaboda pattu ...	A. C. Gunatillaka ...	1,100§	—	420	—	—	410	1508	58	103	408	—	905	—	284	53	63	—	196	—	—	85	10	2	—	2	7
Wellaboda pattu ...	H. C. Gooneratne ...	1,200§	—	426	3	59	1187	1707	499	484	1106	84	749	—	355	81	121	—	458	—	—	147	43	32	2	—	2
Weligam korale ...	G. E. de S. Gooneratne ...	1,210*	—	450	1	1	400	793	79	53	400	1	293	—	313	19	—	—	145	—	24	82	20	15	1	—	—
Morawak korale ...	H. W. Alahakoon ...	924*	—	420	13	21	708	943	165	129	702	3	446	—	194	48	51	—	135	—	75	80	26	4	1	16	15

Hambantota.																														
Giruwa pattu west...	F. W. de Silva ...	1,300*	—	540	27	136	544	1800	97	116	560	—	1172	11	242	34	91	—	253	—	45	68	1	1	—	11	88			
EASTERN PROVINCE.																														
Batticaloa.																														
Batticaloa north ...	Ebenezer Crowther ...	1,320	3 Clerks, 1 at Rs. 240, 1 at Rs. 180, 1 at Rs. 120; 1 Messenger at Rs. 90; and 3 Watchers at Rs. 36 each per annum	738	26	21	920	690	806	163	1905	—	257	—	222	15	31	—	119	—	48	2	2	—	—	41	19			
Batticaloa south ...	Albert Kanagasapai ...	1,320	4 Clerks, 1 at Rs. 240, 2 at Rs. 180 each, 1 at Rs. 150; 2 Messengers at Rs. 120 each; 4 Watchers, 1 at Rs. 60, 1 at Rs. 48, 1 at Rs. 36, and 1 at Rs. 30 per annum	1,164	2	6	3272	1486	1982	493	3274	—	700	23	578	27	7	—	115	—	34	15	35	—	—	—	8			
Bintenna‖ ...	Punchi Banda Mediwaka ...	—	—	—	1	1	24	27	19	20	25	—	16	—	1	—	1	—	8	—	—	—	1	—	—	—	2			
Trincomalee.																														
Trincomalee¶ ...	Venkidachchalacheddiyar Kanakasapai, Mudaliyar	1,100	2 Clerks, 1 at Rs. 240 and 1 at Rs. 210; 1 Messenger at Rs. 120 per annum	570	157	74	1918	578	465	204	1950	6	146	—	330	6	51	—	69	—	—	11	12	1	1	119	50			
NORTH-WESTERN	PROVINCE.																													
Kurunegala.																														
Wanni hatpattu ...	B. W. Relapanawa ...	1,320	1 Clerk at Rs. 20, 1 Assistant Clerk at Rs. 15, 2 Messengers at Rs. 10 each, 2 Court-keepers, 1 at Rs. 5 and 1 at Rs. 2·50, 1 Ambalam-keeper at Rs. 2·50 per month	780	85	99	1900	681	—	—	1744	19	296	—	121	30	129	—	47	—	—	89	8	16	—	222	157			
Wendawili hatpattu	L. Nugawela (up to Oct. 31), T. B. Madawala (Nov. 1, 1902)	1,320	1 Clerk at Rs. 20, 2 Messengers at Rs. 10 each, 2 Court-keepers at Rs. 2·50 each per month	540	11	33	903	806	107	156	811	36	408	—	151	31	52	—	154	—	—	47	4	2	—	67	63			
Dewamedi do.	M. Dodanwela ...	1,320	1 Clerk at Rs. 20, 1 Assistant Clerk at Rs. 10, 1 Extra Clerk at Rs. 15 for six months, 2 Messengers at Rs. 2·50 each, 2 Court-keepers at Rs. 2·50 each per month	750	56	502	728	1152	21	10	646	7	969	—	79	11	57	—	72	—	—	76	—	1	—	131	466			
Dambadeni do.	T. B. Madawala (to Oct. 31), L. Nugawela (from Nov. 1)	1,320	1 Clerk at Rs. 20, 1 Messenger at Rs. 10, 1 Extra Clerk at Rs. 10, 2 Court-keepers at Rs. 2·50 each per month	540	31	34	788	622	50	47	741	14	206	—	117	58	62	—	144	—	—	43	2	1	—	64	69			
Hiriyala do.	G. W. Bakmiwewa ...	1,320	1 Clerk at Rs. 20, 1 Extra Clerk at Rs. 15 for nine months, 2 Messengers at 10 each, 2 Court-keepers at Rs. 2·50 each, 2 Ambalam-keepers at Rs. 1·50 each	711	149	226	614	531	54	15	719	17	250	59	92	17	216	—	54	—	—	42	13	1	—	27	69			
Katugampola do.	A. W. Senanayaka ...	1,320	1 Clerk at Rs. 20, 2 Messengers at Rs. Rs. 10 each, and 2 Court-keepers at Rs. 2·50 each per month	540	24	49	709	1092	—	—	697	—	342	—	226	82	50	—	240	—	—	13	4	3	—	36	201			
Puttalam.																														
Demala hatpattu ...	D. H. M. D. B. Tammitta ...	1,320	1 Clerk at Rs. 15, 1 Liyana-archchi at Rs. 15, 1 Messenger at Rs. 8, 2 Court-keepers, 1 at Rs. 4 and 1 at Rs. 2·50 per month	534	32	99	235	245	4	18	251	2	172	—	38	4	33	—	5	—	—	7	1	—	—	14	92			
NORTH-CENTRAL	PROVINCE.																													
Nuwaragampalata...	K. B. Samaratun ...	1,650	1 Native Writer at Rs. 240, 1 Assistant Writer at Rs. 180, 2 Messengers at Rs. 90 each, and 2 Court-keepers at Rs. 48 each per annum	696	8	24	353	1025	30	79	346	15	591	32	48	10	156	—	20	—	—	34	12	3	1	—	192			
Kalagampalata ...	Tikiri Banda Relapanawe ...	1,650	1 Native Writer at Rs. 240, 1 Assistant Writer at Rs. 180, 3 Messengers at Rs. 90 each, 3 Court-keepers at Rs. 48 each per annum	834	9	39	350	1065	17	48	275	10	471	17	71	2	222	—	7	—	—	42	19	4	—	74	314			

* And travelling allowance of Rs. 360.
† And travelling allowance of Rs. 240.
‡ And travelling allowance of Rs. 160.
§ And travelling allowance of Rs. 300.
‖ And travelling allowance of Rs. 180.
¶ And travelling allowance of Rs. 200.

Districts.	Presidents.	Salaries.	Staff.	Cost of Staff per Annum.	Pending on January 1, 1902.		Instituted during 1902.		Amicable Settlements under Section 23 included under head Decisions.		Decisions.											Appeals.				Pending on December 31, 1902.	
											Civil:		Criminal.									To Govt. Agent.		From G. A. to Governor in Executive Council.			
					Civil.	Criminal.	Civil.	Criminal.	Civil.	Criminal.	Money.	Land.	Breach of V. C. Rules.	Irrigation.	Assault.	Malicious Injury.	Cattle Trespass.	Maintenance.	Theft.	Public Nuisance.	Vaccination.	Confirmed.	Set Aside.	Confirmed.	Set Aside.	Civil.	Criminal.
North-Central Province—*contd.*		Rs.		Rs.																								
Hurulupalata ...	Walter A. Udugama ...	1,650	1 Native Writer at Rs. 240, 1 Assistant Writer at Rs. 180, 2 Messengers at Rs. 90 each, 2 Court-keepers, 1 at Rs. 120 and 1 at Rs. 48 per annum	768	—	16	393	1027	74	127	376	15	730	33	27	1	220	—	6	—	—	42	7	2	—	2	26
Tamankadupalata ...	Gabriel Wijesinghe Jayawardene	858	1 Native Writer at Rs. 240, 2 Messengers at Rs. 90 each, 3 Court-keepers, 2 at Rs. 120 each and 1 at Rs. 36, 1 Gansabhawa Clerk in Kachcheri at Rs. 600, 1 Assistant Clerk at Rs. 420, 1 Messenger at Rs. 120, 1 Court-keeper in the Gansabhawa at Rs. 60 per annum	1,896	5	4	293	316	—	—	297	1	207	—	25	—	80	—	8	—	—	3	—	—	—	—	—
Province of Uva.																												
Udukinda ...	D. W. Banda, Ratemahatmaya	—	1 Clerk at Rs. 10 per month ...	120	—	14	—	586	—	86	—	—	415	124	—	1	59	—	—	—	—	2	—	—	—	—	2
Yatikinda ...	T. B. Katugaha, do. ...	—	1 Clerk at Rs. 15 per month ...	180	—	1	—	339	—	24	—	—	277	53	—	—	10	—	—	—	—	4	—	1	—	—	1
Wiyaluwa ...	H. R. D. Marapone, do. ...	—	1 Clerk at Rs. 10 per month ...	120	—	37	—	149	—	28	—	—	113	45	—	—	27	—	—	—	—	2	—	1	—	—	1
Tunpalata, comprising Wellassa, Buttala, and Bintenna	S. J. M. S. B. Moragahalande, President	792	2 Clerks, 1 at Rs. 20 and 1 at Rs. 10; 3 Peons at Rs. 10 each per month	720	47	146	795	1081	58	96	819	23	640	223	35	103	146	—	55	—	25	8	17	—	—	—	—
Wellawaya ...	K. B. Kadurugamuwa, Ratemahatmaya	—	—	—	—	7	—	26	—	6	—	—	19	9	—	—	—	—	—	—	—	—	—	—	—	—	—	5
Province of Sabaragamuwá.																												
Ratnapura.																												
Kuruwiti korale V.T.	J. A. C. Rambukpota, President	—	—	—	30	89	479	847	—	—	485	5	670	—	30	11	18	—	44	—	—	47	8	5	—	19	163
Village Committee:																												
Nawadun korale...	T. B. Ekneligoda, Chairman	—	—	—	—	—	—	100	—	—	—	—	96	2	—	—	—	—	—	—	—	8	—	1	—	—	2
Meda and Kadawata korales	F. T. Ellawala, do. ...	—	—	—	—	40	—	96	—	6	—	—	92	8	—	—	17	—	—	—	—	9	4	3	1	—	19
Kolonna korale ...	Do. do. ...	—	—	—	—	64	—	21	—	—	—	—	44	—	—	—	—	—	—	—	—	1	1	—	—	—	41
Kukulu korale ...	J. W. Maduwanwala, do. ...	—	—	—	—	13	—	43	—	—	—	—	47	2	—	3	2	—	—	—	—	—	—	—	—	—	2
Atakalan korale...	H. A. Goonesekera do. ...	—	—	—	—	11	—	91	—	—	—	—	93	—	—	—	—	—	—	—	—	1	2	—	—	—	9
Kegalla.																												
Paranakuru korale	L. B. Nawaratna ...	—	—	—	—	15	—	133	—	—	—	—	125	—	—	—	—	—	—	—	—	—	—	—	—	—	23
Beligal korale ...	Richard Eheliagoda ...	—	—	—	—	26	—	319	—	—	—	—	258	—	—	—	—	—	—	—	—	2	—	—	—	—	87

RETURN OF REVENUE, 1902.

Districts.	Revenue from all Sources for 1902. Rs. c.	Average Revenue for Five Years. Rs. c.	Total Advances received up to end of 1902. Rs. c.	Indebtedness on account of Establishment at the end of 1902. Rs. c.
Western Province.				
Colombo.				
Alutkuru Korale South.				
Gampaha ... ... Kanuwana ... ... Village Committees of Wattala, Ambatalenpahala, and Kanuwana ...	579 24	1,273 46	—	—
Hewagam Korale.				
Hanwella ... ... Aturugiriya ... Kaduwela	1,531 43	1,384 34	—	—
Salpiti Korale.				
Gangodawila ... Honnantara... ...	3,772 49	2,757 47	—	—
Siyane Korale West.				
Mahara ... ... Henaratgoda ...	1,459 34	1,642 70	—	—
Negombo.				
Minuwangoda ... Katana	1,230 19	1,433 77	—	—
Village Committee of Hapitigam korale ...	682 60	877 4	—	—
Kalutara.				
Agalawatta ... Lewanduwa ... Matugama	—	—	—	—
Central Province.				
Kandy.				
Udunuwara ...	763 43	1,309 33	—	—
Yatinuwara ...	2,428 10	1,034 57	—	—
Tumpane	569 90	698 5	—	—
Harispattu	4,696 43	2,173 86	—	—
Pata Dumbara ...	2,514 37	1,694 80	—	—
Uda Dumbara ...	766 25	617 39	—	—
Pata Hewaheta ...	306 10	1,015 30	—	—
Udapalata	775 88	985 95	—	—
Uda Bulatgama ...	664 8	242 27	—	—
Matale.				
Matale north ...	1,867 60	1,541 62	—	—
Matale east ...	1,192 23	1,335 65	—	—
Matale south ...	730 22	507 9	—	—
Nuwara Eliya.				
Uda Hewaheta ...	2,292 63	2,180 21	—	—
Walapane	1,907 99	1,709 4	—	—
Kotmale	2,410 13	2,345 10	—	—
Northern Province.				
Mullaittivu.				
Vavuniya north and south, Panankamam, and Metkumulai	498 99	—	—	—
Delft east, middle, and west ...	177 50	—	—	—
Southern Province.				
Galle.				
Bentota-Walallawiti korale...	1,259 26	1,288 89	—	—
Gangaboda pattu ... Hinidum pattu ...	487 95	501 82	—	—
Matara.				
Gangaboda pattu ...	2,149 87½	1,415 59	—	—
Wellaboda pattu ...	4,198 81½	1,457 14	—	—
Weligam korale ...	2,111 85	2,476 33	—	—
Morawak korale ...	1,300 0	1,027 15	—	—
Hambantota.				
Giruwa pattu west ...	2,059 88	2,375 28	—	—

Districts.	Revenue from all Sources for 1902.	Average Revenue for Five Years.	Total Advances received up to end of 1902.	Indebtedness on account of Establishment at the end of 1902.
	Rs. c.	Rs. c.	Rs. c.	Rs. c.
Eastern Province.				
Batticaloa.				
Batticaloa north ...	717 25	834 70	—	—
Batticaloa south ...	2,280 16	1,389 67	—	—
Bintenna	35 0	44 86	—	—
Trincomalee.				
Trincomalee ...	2,193 48	1,416 74	—	—
North-Western Province.				
Kurunegala.				
Weudawili hatpattu ...	4,314 24	3,124 24	—	—
Wanni hatpattu ...	3,142 70	7,427 39	—	—
Dambadeni hatpattu ...	2,123 82	2,918 78	—	—
Dewamedi hatpattu ...	5,909 65	8,119 10	—	—
Hiriyala hatpattu ...	3,622 50	4,377 58	—	—
Katugampola hatpattu ...	4,251 70	5,650 76	—	—
Puttalam.				
Demala hatpattu ...	2,819 0	1,686 55	—	—
North-Central Province.				
Nuwaragampalata ...	2,051 50	2,584 0	2,584 0	—
Kalagampalata ...	2,084 61	2,651 94	500 0	500 0*
Hurulupalata ...	2,272 88	2,030 0	—	—
Tamankadupalata ...	3,628 53	3,548 52	—	—
Province of Uva.				
Udukinda ...	—	—	—	—
Yatikinda ...	—	—	—	—
Wiyaluwa ...	—	—	—	—
Wellassa ...	—	—	—	—
Buttala ...	—	—	—	—
Bintenna ...	—	—	—	—
Wellawaya ...	—	—	—	—
Province of Sabaragamuwa.				
Ratnapura.				
Kuruwiti Korale V. T. ...	—	—	—	—
Village Committee :				
Nawadun korale ...	—	—	—	—
Meda korale ...	—	—	—	—
Kuruwiti korale ...	—	—	—	—
Kolonna korale ...	—	—	—	—
Kadawata korale ...	—	—	—	—
Kukulu korale ...	—	—	—	—
Atakalan korale ...	—	—	—	—
Kegalla.				
Paranakuru korale ...	—	—	—	—
Beligal korale ...	—	—	—	—

* Borrowed from tank fines.

XXXVII.—1903.

THE SUPPLY BILL, 1904.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance for making provision for the Contingent Services for the year 1904."

Ordered by the Legislative Council to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 15 cents.

1903.

EXTRACT from the Minutes of the Legislative Council dated October 31, 1903.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled "An Ordinance for making provision for the Contingent Services for the Year 1904":—

The Hon. Mr. EVERARD F. IM THURN, C.B., C.M.G., Colonial Secretary.
The Hon. Mr. F. R. ELLIS, C.M.G., Auditor-General.
The Hon. Mr. H. H. CAMERON, Treasurer.
The Hon. Mr. G. M. Fowler, Government Agent, Western Province.
The Hon. Mr. H. L. CRAWFORD, Acting Principal Collector of Customs.
The Hon. Mr. W. G. ROCKWOOD, M.D.,
The Hon. Mr. S. C. OBEYESEKERE,
The Hon. Mr. F. C. LOOS,
The Hon. Mr. W. H. FIGG,
The Hon. Mr. E. ROSLING,
} Unofficial Members.

THE SUPPLY BILL, 1904.

THE Sub-Committee of the Council have the honour to report that they have carefully considered the details of the Draft Estimates for 1904 placed before them.

The Estimate of Revenue may be accepted, and may be expected to be realized.

Appended to the Report is a statement of the additions and reductions which the Committee recommend should be made in the Draft Estimates laid before the Council.

Under "Secretariat" a total addition of Rs. 6,900 is necessary. This includes Rs. 3,600 for two clerks of Class I. at Rs. 1,800 each, and Rs. 3,000 to be added to the Vote for Plant and Material for the Printing Office for the purchase of a new printing machine. The Committee note that the increase of expenditure for the Secretariat has risen from Rs. 112,169 in 1902 to Rs. 129,439 for 1904, and they express the hope that for some years no further considerable increases will be found necessary.

The suggested addition under "Provincial Administration" is Rs. 9,189, and comprises mainly a sum of Rs. 1,500 required in connection with a scheme for obtaining water for the supply of immigrant coolies at the Tataparai Depôt, and Rs. 6,000, being a contribution by Government in aid of the establishment of dispensaries in the North-Central Province.

It is proposed to reduce the vote of Rs. 4,500 for cost of acquiring fields at Pannagama in connection with the water supply, Matale, to Rs. 1,500. The Committee have examined the papers on the subject, and they believe that even this expenditure should not be actually incurred until further inquiry has shown that it could not be avoided by carrying out the Assistant Government Agent's suggestion for an exchange of lands.

With reference to the provision on account of Immigration allowed to the Assistant Government Agent, Mannar, the Committee are of opinion that in future Estimates all the expenses of Immigration should be grouped and divided into sub-heads according to the Departments to which the money is voted. It is desirable that there should be no difficulty in ascertaining at once the amount of the total expenditure under this head.

Votes amounting to Rs. 3,300 for expenses in working the Waste Lands Ordinance may be omitted in view of the formation of the New Land Settlement Department.

Under Vote 14, the provision for station allowances to clerks of the District Court, Badulla, should be increased by Rs. 142. Hitherto clerks in the Class IV. of the Clerical Service drawing under Rs. 500 a year were not given these allowances, but it was recently decided that they also should in fairness receive the station allowance granted to officers receiving higher salaries.

Provision should be included for Rs. 360 for two guards for the Fiscal, Colombo. The employment of these officers has become necessary in consequence of the closing of the Avisawella jail.

It is proposed to increase the provision for "Expenses attending the execution of Criminal Process" allowed to the Fiscal, Western Province, owing to the insufficiency of the amount hitherto allowed.

Under Vote 15, Police, the additions recommended are mainly for lodging allowance to sergeants and constables. The Committee, while agreeing to the necessity for increased lodging allowance, would invite the attention of Government to the desirability of increasing the barrack accommodation. This would, it is believed, be very beneficial to the discipline of the Force, and would also prove more economical.

The Committee would be glad to see better arrangements made for the regulation of the traffic in the streets of Colombo by the police, and feel confident that the Council would readily vote any reasonable sum which would secure this end.

The Hambantota prison having been closed, the vote of Rs. 2,625 is no longer necessary, and may be omitted.

In order to provide a Lecturer in Chemistry and Physics for the students of the Medical College and the Technical College, a sum of Rs. 3,000 should be included for salary of this officer for the latter half of 1904. Provision is also proposed for two Laboratory Assistants and two coolies for the same period.

Under the head "Education" an addition of Rs. 984 is recommended to the vote for Maintenance of Reformatory Boys, and a sum of Rs. 10,000 should be inserted for the purchase of necessary apparatus to equip the Chemical and Physical Laboratories which are being constructed at the new Technical College for the use of the students of both the Medical and Technical Colleges. The Committee suggest that the vote for the salary of the Inspectress of Needlework be reduced from Rs. 4,000 to Rs. 3,000.

Vote 24, Miscellaneous Services, should be increased by a sum of Rs. 4,500, being a contribution by the Ceylon Government towards starting a scheme of visual instruction between schools in the Eastern Colonies and schools in the United Kingdom. This expenditure is proposed and strongly urged at the instance of the Secretary of State.

Owing to the expansion of the Postal-Telegraph Department and the consequent increase of work, it has become necessary to appoint two Deputy Postmasters at Rs. 1,700 each. A sum of Rs. 3,400 should therefore be included on account of their salary. Additional batterymen have to be provided for the Telegraph Department. The Postal-Telegraph Department will take charge of the working of the electrical work of the Railway Department from next year. An addition of Rs. 2,000 is proposed to the vote for Extra Remuneration to Clerks, and Rs. 300 for Pillar Letter Boxes.

Considerable additions are suggested under the head "Railway Department." The Committee are satisfied that these additions are necessary. It should, however, be noted that the large increase includes a sum of Rs. 92,741, re-votes of the current year. Some legitimate reduction is suggested in the votes for coal and firewood.

For Public Works Annually Recurrent a few additions are proposed. The Deltota branch road has been taken over by the Government as a principal road, and the provision of Rs. 7,000 for upkeep is doubled. A sum of Rs. 3,600 is suggested for maintenance of the Kuliyapitiya-Hettipola road. It is proposed to increase the general provision for additions and improvements to Government buildings by Rs. 8,000, bringing the total to Rs. 25,000. The vote for the current year is Rs. 20,000.

The provision for the Ellearawa-Pinnewala road should be increased by Rs. 1,000, in order to assist the planters in metalling the worst parts of the road. This allowance, the Committee recommend, should not be repeated unless substantial progress is made by the planters themselves on the work.

It has been brought to the notice of the Committee that questions frequently arise as to the responsibility for the upkeep of approach roads to stations, the Railway and Public Works Departments being unable to agree as to which Department is to do the work. The Committee advise that approach roads which lead from a principal road to the station be placed in charge of the Public Works Department.

Under the head "Public Works Department Extraordinary" several additions and reductions are proposed. The Committee have given careful consideration to the various items, and recommend that the alterations be made. They desire to invite attention to the necessity of improving the Museum, a work which has been long delayed.

The total additions amount to Rs. 437,635 and the total reductions to Rs. 110,615.

EVERARD IM THURN.
F. R. ELLIS.
H. H. CAMERON.
G. M. FOWLER.
H. L. CRAWFORD.
W. G. ROCKWOOD, M.D.
S. C. OBEYESEKERE.
F. C. LOOS.
W. H. FIGG.
E. ROSLING.

Legislative Council Chamber,
Colombo, November 25, 1903.

Appendix.

STATEMENT OF ADDITIONS AND REDUCTIONS PROPOSED BY THE SUB-COMMITTEE.

3.—HIS EXCELLENCY THE GOVERNOR.

	Additions. Rs.	Reductions. Rs.
Personal Emoluments.		
Increase of salary to two lascoreens at Rs. 18 each ...	36 ...	—

3A.—CIVIL SERVICE.

Personal Emoluments.		
Personal allowance to Mr. H. R. Freeman ...	1,000 ...	—

4.—SECRETARIAT.

Personal Emoluments.		
Two clerks, Class I.	3,600 ...	—
Other Charges.		
Remuneration to extra copyists	120 ...	—
Printing Branch.		
Personal Emoluments.		
Increase of salary to Assistant Government Printer ...	100 ...	—
Increase of salary to Second Assistant Government Printer	80 ...	—
Other Charges.		
Purchase and upkeep of plant and material ...	3,000 ...	—
Carried over ...	7,936 ...	—

	Additions. Rs.	Reductions. Rs.
Brought forward ...	7,936 ...	—
7.—PROVINCIAL ADMINISTRATION.		
Western Province.		
Personal Emoluments.		
Colombo : Personal allowance to bookbinder ...	50 ...	—
Central Province.		
Special Expenditure.		
Allowance for the establishment of a Kandyan museum	— ...	480
Cost of acquiring fields at Pannagama	— ...	3,000
Rain capes for tappal messengers, Nuwara Eliya ...	25 ...	—
Northern Province.		
Personal Emoluments.		
Mannar : Tindal and crew of lightvessels off Rameswaram	— ...	420
Other Charges.		
Maintaining a lightvessel and crew	— ...	330
Special Expenditure.		
Scheme for obtaining water, Tataparai... ...	1,500 ...	—
Eastern Province.		
Other Charges.		
Batticaloa : Expenses in working Waste Lands Ordinance	— ...	300
Do. Remuneration to headmen... ...	— ...	360
North-Western Province.		
Personal Emoluments.		
Kurunegala : Two coolies	240 ...	—
Special Expenditure.		
New iron safe for Chilaw Kachcheri	260 ...	—
North-Central Province.		
Other Charges.		
Protection of game	300 ...	—
Special Expenditure.		
Grant in aid for dispensaries at Tammuttegama, Eppawala, and Yakella	6,000 ...	—
Province of Uva.		
Other Charges.		
Expenses in working the Waste Lands Ordinance ...	— ...	3,000
Government bungalow, Diyatalawa	500 ...	—
Station allowance to clerks, &c.	314 ...	—
11.—PORT AND MARINE OTHER THAN COLOMBO.		
Master Attendant, Trincomalee.		
Personal Emoluments.		
Two latrine coolies at Rs. 120 each	240 ...	—
Master Attendant, Batticaloa.		
Other Charges.		
Two chains and anchor blocks for fixing buoys ...	205 ...	—
14.—LEGAL.		
Supreme Court.		
Personal Emoluments.		
Additional bookbinder	300 ...	—
District Judge, Badulla.		
Other Charges.		
Station allowance to clerks	142 ...	—
District Judge, Jaffna.		
Special Expenditure.		
New seal	45 ...	—
Police Magistrate, Colombo.		
Personal Emoluments.		
Additional cooly	120 ...	—
Police Magistrate, Kandy.		
Personal Emoluments.		
Recordkeeper, Galagedara	120 ...	—
Messenger, Galagedara	60 ...	—
Carried over ..	18,357	7,890

	Additions. Rs.	Reductions. Rs.
Brought forward ...	18,357 ...	7,890
Registration of Lands.		
Other Charges.		
Station allowance to clerks	36 ...	—
FISCALS.		
Western Province.		
Personal Emoluments.		
Two guards at Rs. 180 each	360 ...	—
Other Charges.		
Expenses attending the execution of criminal process ...	840 ...	—
Southern Province.		
Personal Emoluments.		
Hambantota: Two additional peons	240 ...	—
Province of Uva.		
Other Charges.		
Station allowance to clerks	95 ...	—
15.—POLICE.		
Inspector-General of Police.		
Other Charges.		
Lodging allowance to European sergeants and constables	3,120 ...	—
Lodging allowance to native sergeants and constables ...	17,400 ...	—
Western Province.		
Personal Emoluments.		
Latrine and water cooly, Avisawella	108 ...	—
Other Charges.		
Lodging allowance	600 ...	—
Central Province.		
Other Charges.		
Lodging allowance	765 ...	—
Northern Province.		
Other Charges.		
Lodging allowance	288 ...	—
Southern Province.		
Other Charges.		
Lodging allowance	1,218 ...	—
Special Expenditure.		
Note-books for headmen	— ...	125
Eastern Province.		
Personal Emoluments.		
Rural police	360 ...	—
Other Charges.		
Lodging allowance	864 ...	—
Province of Uva.		
Other Charges.		
Lodging allowance	60 ...	—
16.—PRISONS.		
Hambantota	— ...	2,625
17.—MEDICAL DEPARTMENT.		
Personal Emoluments.		
Lecturer in chemistry and physics (for six months) ...	3,000 ...	—
Two laboratory assistants (do.) ...	360 ...	—
Two coolies at Rs. 150 each (do.) ...	150 ...	—
20.—EDUCATION.		
Personal Emoluments.		
Inspectress of needlework	— ...	1,000
Other Charges.		
Maintenance of reformatory boys	984 ...	—
Expenses connected with the school gardens ...	900 ...	—
Special Expenditure.		
Equipment for new chemical and physical laboratory...	10,000 ...	—
Carried over ...	60,105	11,640

	Additions. Rs.	Reductions. Rs.
Brought forward ...	60,105 ...	11,640
23.—MILITARY EXPENDITURE.		
Volunteer Regiment: Arm cleaner	180 ...	—
24.—MISCELLANEOUS SERVICES.		
Special Expenditure.		
Contribution towards starting scheme for a system of visual instruction between schools in the Eastern Colonies and the United Kingdom	4,500 ...	—
25.—CONTROLLER OF GOVERNMENT STORES.		
Personal Emoluments.		
Personal allowance to bookbinder	60 ...	—
27.—FOREST DEPARTMENT.		
Other Charges.		
Communications and buildings	3,000 ...	—
Purchase of stores, tools, plants, &c.	2,621 ...	—
28.—POSTAL DEPARTMENT.		
Personal Emoluments.		
Two deputy postmasters	3,400 ...	—
Two additional postmen, Kandy	360 ...	—
Telegraph Branch.		
Increment to Assistant Superintendent ...	117 ...	—
Batteryman	396 ...	—
Three additional batterymen at Rs. 240 each ...	720 ...	—
One Inspector	600 ...	—
Other Charges.		
Conveyance of mails:		
Colombo and Ratnapura, Ratnapura and Pelmadulla, &c.	4,260 ...	—
Hatton and Bogawantalawa and Norwood and Maskeliya	1,800 ...	—
Nuwara Eliya Station and Post Office ...	1,800 ...	—
Extra remuneration to clerks	2,000 ...	—
Special Expenditure.		
Purchase of pillar letter-boxes	300 ...	—
Telegraph extension, Rakwana to Deniyaya (re-vote) ...	4,000 ...	—
Cost of new date stamps (re-vote)	2,835 ...	—
29.—RAILWAY DEPARTMENT.		
Accountant's Department.		
Personal Emoluments.		
Increase of salary of three kanakapillais ...	90 ...	—
Ways and Works Department.		
Incline foreman, Kadugannawa	1,200 ...	—
Shop foreman	2,100 ...	—
KELANI VALLEY SECTION.		
Traffic Department.		
Personal Emoluments.		
One Station Master	875 ...	—
Other Charges.		
Ways and Works Department.		
Fitters, &c.	5,000 ...	—
Permanent way materials	12,000 ...	—
Sunday pay to foremen, &c.	300 ...	—
Overtime pay	200 ...	—
Night allowance to foremen	— ...	300
Locomotive Department.		
Fitters, &c.	10,000 ...	—
Coal	— ...	25,000
Firewood	— ...	5,000
Stores and materials	20,000 ...	—
NORTHERN SECTION.		
Other Charges.		
Locomotive Department.		
Oil	— ...	350
Carried over ...	144,819	42,290

	Additions. Rs.	Reductions. Rs.
Brought forward ...	144,819 ...	42,290
KELANI VALLEY SECTION.		
Locomotive Department.		
Coal	— ...	4,000
Special Expenditure.		
Improvements, Bandarawela line	9,950 ...	—
NEW WORKS.		
Relaying goods shed, Kurunegala	1,320 ...	—
Covering in overbridge, Nanu-oya	609 ...	—
St. Sebastian bridge	3,649 ...	—
RE-VOTES OF 1903.		
Quarters for goods clerk, Talawakele	1,403 ...	—
Interlocking points and signals	19,255 ...	—
Enclosing workshops, Colombo	13,000 ...	—
Staff lines, Traffic Department	400 ...	—
Extension of machine shop, Colombo	12,783 ...	—
Extending roof of Talawakele platform ...	2,500 ...	—
ROLLING STOCK.		
Three bogie goods brake vans	6,777 ...	—
Extension of Tyer's tablet system	29,797 ...	—
Printing Revised Audit Office Instructions ...	500 ...	—
Printing Store Catalogue and Price List ...	300 ...	—
Renewing bridge, 18 miles 18 chains ...	4,000 ...	—
Goods clerk's bungalow, Talawakele	526 ...	—
Improvements to dangerous places, Bandarawela Extension	1,500 ...	—
31.—PUBLIC WORKS DEPARTMENT.		
Personal Emoluments.		
Personal allowance to Mr. G. H. M. Hyde, Mechanical Engineer	1,000 ...	—
32.—CONSULTING ELECTRICAL ENGINEER.		
Personal Emoluments.		
Salary of clerk	— ...	200
Cooly	120 ...	—
33.—PUBLIC WORKS ANNUALLY RECURRENT.		
Maintenance of Roads.		
Central Province.		
Deltota road	7,000 ...	—
Nuwara Eliya District: Lake and Moon Plains road	250 ...	—
Eastern Province.		
Kalmunai District: Kalmunai Sea View road ...	150 ...	—
North-Western Province.		
Kurunegala District: Approach roads to public buildings	800 ...	—
Dandugama District: Kuliyapitiya to Hettipola ...	3,600 ...	—
Province of Sabaragamuwa.		
Ratnapura District: Ellearawa-Pinnawela road ...	1,000 ...	—
Repairs to Buildings.		
For maintenance of Customs wharf, jetties, and cranes	1,600 ...	—
Additions to Buildings.		
For additions and improvements to Government buildings	8,000 ...	—
34.—PUBLIC WORKS DEPARTMENT EXTRAORDINARY.		
Western Province.		
New Works and Buildings.		
Superintendent's quarters, Ragama	— ...	5,400
Quarters for magazine-keeper, Welikada ...	— ...	4,910
Cooly lines and overseer's quarters	—	3,000
Central Province.		
Erection of an ambalam	— ...	7,850
Southern Province.		
Jailer's quarters, Hambantota	— ...	3,100
Cooly lines and overseer's quarters	3,000 ...	—
Pulling down present coal shed barracks and erecting a new block	— ...	8,400
Eastern Province.		
Police Court, Kalmunai...	500 ...	—
Carried over ...	280,108	79,150

	Additions. Rs.	Reductions. Rs.
Brought forward ...	280,108 ...	79,150
North-Central Province.		
Jailer's quarters, Anuradhapura	6,350 ...	—
Alterations and Additions to Buildings.		
Western Province.		
Alterations, Lunatic Asylum	— ...	17,750
Alterations, General Post Office	1,057 ...	—
Central Province.		
Additions to house of Director, Botanic Gardens ...	*3,200* ...	—
Adaptation of Post Office, Kandy, as police barracks ...	*8,700* ...	—
Alterations, Post Office, Dikoya	— ...	*1,200*
Improvements, Hatton Post Office	— ...	*1,310*
Improvements to Assistant Government Agent's quarters, Nuwara Eliya	4,400 ...	—
Cattle shed, well, &c., Gangaroowa	5,600 ...	—
Southern Province.		
Improvements, Galle hospital	2,200 ...	—
Improvements, Tangalla hospital	11,300 ...	—
Registrar's Office, Galle...	550 ...	—
Eastern Province.		
Latrine, Foul Point Lighthouse, Trincomalee ...	1,240 ...	—
North-Western Province.		
Shutters for presses of Assistant Provincial Registrar's Office, Chilaw	— ...	1,350
Additions, &c., Police Court, Kurunegala ...	— ...	5,130
Province of Sabaragamuwa.		
Alterations and additions to Government Agent's bungalow	1,865 ...	—
Presses for Registrar's Office, Kegalla and Ratnapura ...	800 ...	—
Special Repairs to Buildings.		
Western Province.		
Repairs, branch store, Government Factory ...	1,870 ...	—
Repairs to District Judge's bungalow, Negombo ...	2,780 ...	—
North-Western Province.		
Repairs to hospital buildings	1,770 ...	—
North-Central Province.		
Repairs to cooly bungalow, Mihintale	450 ...	—
Repairs to Topawewa dispensary	800 ...	—
Province of Uva.		
Repairs to Government bungalow, Diyatalawa ...	1,850 ...	—
New Roads.		
Central Province.		
Gampola-Dolosbage road (moiety)	1,750 ...	—
North-Western Province.		
Approach road to Talawe (re-vote)	1,300 ...	—
Western Province.		
Road from Urapola to Weke through Hanwella ...	3,250 ...	—
Additions and Improvements to Roads.		
Central Province.		
Kadugannawa-Alagalla (re-vote)	250 ...	—
Improvements, Lindula to end of Agra road ...	775 ...	—
Eastern Province.		
Ondatchimadam causeway	4,750 ...	—
Causeway, Periyakallar	8,000 ...	—
North-Central Province.		
Habarana-Topawewa road	1,000 ...	—
Repairs of Bridges.		
Central Province.		
Castlereagh bridge	— ...	25
Galaha bridge	5,000 ...	—
Carried over ...	362,965 ...	105,915

	Additions. Rs.	Reductions. Rs.
Brought forward ...	362,965 ...	105,915
Miscellaneous.		
Western Province.		
Wire entanglement, Mahara quarry	4,125 ...	—
Four additional electric fans for minor courts, Colombo ...	600 ...	—
Central Province.		
Volt meter for testing electric light, Kandy ...	150 ...	—
Kandapola forest service road	950 ...	—
Southern Province.		
Repairing rampart wall, Galle	1,600 ...	—
Maintenance of Fort, Galle	2,000 ...	—
Eastern Province.		
Survey of Batticaloa-Kalmunai and Palugama road ...	660 ...	—
Survey of Vavunitivu-Sammanturai road ...	1,635 ...	—
North-Western Province.		
Survey of Nikawewa-Galgamuwa road	2,600 ...	—
Survey of Ehatuwewa to Ambanpola	1,500 ...	—
Survey of Kuliyapitiya to Hettipola	1,650 ...	—
Survey of Alawwa-Dempalassa road	2,500 ...	—
Province of Sabaragamuwa.		
Drainage, Yatiyantota bazaar	3,000 ...	—
Converting timber bridge, Rakwana bazaar, into an iron one	— ...	4,700
Water supply, Rambukkana (re-vote)	49,200 ...	—
Contribution towards building a resthouse at Kotiyagala	2,500 ...	—
Total ...	437,635	110,615

XXXVIII.—1903.

COAL TENDERS FOR 1904.

SCHEDULE

OF

TESTS OF COAL SUPPLIED WITH TENDERS FOR 1904

FOR THE CEYLON GOVERNMENT RAILWAY.

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 5 cents.

1903.

CEYLON GOVERNMENT RAILWAY.

COAL FOR 1904.

Results of Trials of Indian Coal on the Main Line, on No. 14 Up and Down Mail Trains between Colombo and Nawalapitiya, September-October, 1903.

Name of coal ...	...	Special Jerriah from sample.	Poniati coal from sample.	Jardine's locomotive coal from bulk.	Lawrie's Joyramdanga from sample.	Special Jerriah (2nd trial) from sample.	Bengal coal.
Name of agent ...	...	Clark, Young & Co.	Delmege, Forsyth & Co.	Delmege, Reid & Co.	Delmege, Reid & Co.	Clark, Young & Co.	Bois Bros.
Date of trial ...	...	September 14 and 15.	September 16 and 17.	September 18 and 19.	September 21 and 22.	September 23 and 24.	October 12 and 13.
Number of engine ...	...	124	124	124	124	124	124
Total coal consumed, lb.	...	7,050	8,738	7,285	8,687	6,209	7,985
Total water consumed, gallons	...	5,235	5,064	5,033	5,189	5,306	5,192
Total ash in smoke box, cubic feet...		14	11½	10½	10½	10½	10½
Total ash in ash pan and fire box, cubic feet ...	...	29½	33	31	30	28	34¼
Total mileage run ...	...	182½	182½	182½	182½	182½	182½
State of weather ...		Up journey fine. Down journey showery.	Fine.	Fine.	Up trip.* Down trip fine.	Up trip showery to fair. Down trip fine.	Fine.
Load Up	Colombo-Rambukkana ...	28	28	28	27½	27½	25½ = 28
	Rambukkana-Kandy ...	20	20½	20	20	20	20
	Kandy-Peradeniya Junction	9	8	16	12	9	12
	Peradeniya Junction-Nawalapitiya... ...	23	23	23	23	23	23
Load Down	Nawalapitiya-Kadugannawa	23	23	23	23	23	23
	Kadugannawa-Colombo	28	28	28	28	28	28
Average coal burnt per mile, lb. ...		38·63	47·87	39·91	47·60	34·02	43·75
Average water evaporated per lb. of coal, in gallons ...	...	·70	·579	·69	·597	·854	·650
Total ash formed, cubic feet	...	43½*a*	44½*b*	41½*c*	40½*d*	38½*e*	44¾*f*

Remarks.

a A good steaming coal; not much smoke; clinker small and brittle.

b Good steaming coal; fire pricked up at Rambukkana and Kandy; very smoky; ash dirty; too high consumption.

c Plenty of steam. Our present contract coal taken from bulk.

d * Wet to Rambukkana, drizzle Rambukkana to Kandy; Kandy to Nawalapitiya fine; good steaming coal; ash clean; too high consumption.

e Plenty of steam all the way.

f Plenty of steam; coal rather soft and decidedly smoky; too much dirt in it.

General Remarks.

No wood used in these tests. Load given is equivalent to four-wheeled vehicles.

October 15, 1903.

H. G. UNSWORTH,
Locomotive Engineer.

XXXIX.—1903.

THE OPIUM BILL.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance to amend 'The Opium Ordinance, 1899.'"

Ordered by the Legislative Council to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 5 cents.

1903.

EXTRACT from the Minutes of the Legislative Council dated November 20, 1903.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled "An Ordinance to amend 'The Opium Ordinance, 1899'" :—

The Hon. Mr. A. G. LASCELLES, K.C., Attorney-General.
The Hon. Mr. G. M. FOWLER, Government Agent, Western Province.
The Hon. Mr. H. L. CRAWFORD, Acting Principal Collector of Customs.
The Hon. Mr. F. C. LOOS,
The Hon. Mr. W. M. ABDUL RAHIMAN, } Unofficial Members.

THE OPIUM BILL.

THE Sub-Committee appointed by the Legislative Council to consider and report on the draft of an Ordinance to amend "The Opium Ordinance, 1899," have the honour to report as follows:—

In section 2 of the Draft Ordinance they recommend the adoption of the following amendments in the several sections which the Draft Ordinance substitutes for sections 9, 10, 11, and 12 of the principal Ordinance, namely :—

(*a*) In section 9 to substitute the word "licenses" for the word "license."

(*b*) In section 10 (1) for the words "or private tender" to substitute the words "or by tender."

(*c*) For section 10 (3) to substitute the following sub-section :—"If at any sale the amount of the highest bid or tender is, in the opinion of the proper authority, inadequate, the proper authority shall be at liberty to postpone the sale, and to offer the license for sale again by auction or by tender or by private contract."

(*d*) In section 11, in line 1, for the words "Immediately after any person is declared" to substitute the words "After any person has been declared." In line 2 for the word "shall" to substitute the word "may;" in the penultimate line to delete the word "said."

(*e*) In section 12, in line 5, to delete the words "in accordance with such conditions."

2. The attention of the Sub-Committee has been directed to section 5 of the principal Ordinance, which prohibits the possession by unlicensed persons of a greater quantity of opium than one pound.

The limit of one pound is, in the opinion of the Sub-Committee, far too high, especially as the maximum quantity which a licensed retail dealer is permitted by section 15 to sell at any one time to any person is fixed at 180 grains.

The Sub-Committee are of opinion that the maximum quantity of opium which an unlicensed person is permitted to possess should be the same as the maximum quantity which is allowed to be sold at one time to any one person, namely, 180 grains.

The Sub-Committee therefore recommend the addition to the Draft Ordinance of the following section :—

3. In sections 5, 7, and 17 of the principal Ordinance the figures and words "180 grains" shall be substituted for the words "one pound."

A. G. LASCELLES.
G. M. FOWLER.
H. L. CRAWFORD.
F. C. LOOS.
W. M. ABDUL RAHIMAN.

Legislative Council Chamber,
Colombo, December 2, 1903.

2(7)03

XL.—1903.

WASTE LANDS ORDINANCES.

RETURNS

SHOWING

FOREST, CHENA, WASTE, AND UNOCCUPIED LANDS DECLARED CROWN PROPERTY DURING 1902.

Ordered by the Legislative Council to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 40 cents.

1903.

WASTE LANDS.

A.—Annual Return of all Lots of Forest, Chena, Waste, and Unoccupied Lands declared to be the Property of the Crown under Ordinance No. 1 of 1897, during the Year 1902.

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent.	Claimants (if any).	Remarks.
					A. R. P.		
WESTERN PROVINCE. Nil.							
CENTRAL PROVINCE. *Kandy District.* Nil.							
Matale District. Nil.							
Nuwara Eliya District. Nil.							
NORTHERN PROVINCE. Nil.							
SOUTHERN PROVINCE. *Galle District.*							
February 28, 1902 ...	Dediwila, Kirimetiya, and Motawa forest	Diviture ...	Plan dated July 23, 1861.	224, 246, 423, 443, 445, 462, 465	405 0 0	Wannipura Oda of Diviture	
March 7, 1902 ...	Weniyara forest ...	do. ...	—	712 & 713	89 3 12	—	
March 22, 1902 ...	Maswillekande forest ...	do. ...	—	615, 623, 693, 695	49 1 12	—	
September 12, 1902 ...	Madunkumburebedda, &c. ...	Batapola and Godagama ...	W. L. O. Survey	123, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 174, 177, 178, 179	590 2 24	(1) Gurusinha Don Isaac de Silva, (2) Kareyawassam Bendigodagamage Jandris de Silva, (3) Gurusinha Don Mathes de Silva, (4) Godagamagamage Janis de Silva, (5) Godagamagamage Isaac de Silva, (6) Bendigodagamage Ondiris, (7) Godagamagamage Senerat de Silva, (8) Godagamagamage Nandoris, (9) Gamage Siman, (10) Nanayakarawasan Abeyaratna Gunawardana Hendrick de Silva, (11) Bandarigodage Isandihami, (12) Nanayakkarawassan Karijjawattege Dollis de Silva	
November 28, 1902 ...	Aharagalamukalana ...	Delfawa ...	36	1	474 3 34	—	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent.	Claimants (if any).	Remarks.
					A. R. P.		
SOUTHERN PROVINCE.							
Matara District.							
January 3, 1902 ...	Migahahena, &c. ...	Beralapanatara ...	33	113½ & 119	160 0 24	(1) Madurapperumage Huratalhami, (2) Gamage Dingi Appu, (3) Miellege Dingi Appu, (4) Madurapperumage Dingi Appu, and (5) Singappuli Liyanage Don Andiris	—
Do. ...	Kebellangodahena, &c. ...	Hattotuwa ...	17	17½	29 3 8	—	—
Do. ...	Ratkeratolla ...	Warakapitiya ...	1,568	840	9 1 13	Vitanagamage Don Siman Appu	—
Do. ...	Karawketiyehena, &c. ...	Pangala ...	24	29 & 90	166 2 39	(1) Don Andris Wijesekara Dahanayaka and (2) Don Siyadoris de Silva Siriwardana	—
Do. ...	Bibulakuttiya ...	Akurugoda ...	4,899	14,010, 14,011, 14,012	22 2 11	(1) Kaluarachchige Don Carolis and (2) Usgoda-arachchige Babun	—
Do. ...	Watadeniyehena ...	Asmagoda ...	W. L. O. S. No. 44	A½, A¹, A⁹	2 1 20	(1) Dapanage Sinno Appu, (2) Koralegodage Andris Appu, (3) Kankananbuhuttige Pedris Appu, and (4) Narandeniyege Andris Appu	—
January 10, 1902	Unapandurehena *alias* Ellabodahena ...	Alapaladeniya ...	9	15	10 2 4	(1) Don Andris Wijesekara Dahanayaka, (2) Dahanayaka Atukoralage Don Abaron, (3) Dahanayaka Atukoralage Don Carolis, and (4) Dahanayaka Atukoralage Don Andris	—
Do. ...	Horakandamukalana, &c. ...	Weliwe ...	10	1	11 0 23	—	—
Do. ...	Batahena, &c. ...	do. ...	10	20½, 33, 41, 42, 43, 52, 53, 54, 55	1,222 2 11	—	—
Do. ...	Ambagasmullehena, &c. ...	Beralapanatara ...	33	15, 16, 19*a*, 40	165 0 22	—	—
Do. ...	Paragahadeniyehena, &c. ...	Weliwe ...	10	147, 148, 149, 166, 163, 165	72 1 30	—	—
Do. ...	Badulukele ...	Kitalabatgama ...	3,441	7,765	} 204 3 17	(1) Pemanada Terunnanse and (2) Hewawaduge Don Carolis	—
			337	2,505¾ 2,505½			
January 17, 1902 ...	Paranawattahena ...	Gorakawala ...	5	13*a*	4 0 10	—	—
Do. ...	Tunmodarahena, &c. ...	Weliwe ...	10	141, 174, 169	89 1 15	—	—
January 24, 1902 ...	Kapurukoladeniyemedagodella ...	Alapaladeniya ...	9	34	4 2 15	(1) Don Andris Wijesekara Dahanayaka, (2) Dahanayaka Atukoralage Don Abaron, (3) Dahanayaka Atukoralage Don Carolis, and (4) Dahanayaka Atukoralage Don Andris	—

January 24, 1902	..	Medagodahena *alias* Yakahaluwehena	..	Moragala	...	2	43½	2	2	10	(1) Malawipatiranage Don Andris, (2) Malawige Matheshami, (3) Malawipatiranage Disanhami, (4) Malawipatiranage Endris, (5) Malawige Disanhami, (6) Malawige Lokuappu, (7) Malawige Babahami, (8) Maddumage Adirian, (9) Gamage Juwanhami, (10) Kiramage Garuhami, and (11) Malawige Dassanhami	—	—
Do.	...	Andahena, &c.	...	Siyambalagoda	...	12	195, 192	27	2	28	—	—	—
January 31, 1902	...	Madolgasdeniyahena	...	Beralapanatara	...	33	66	6	0	0	Mautrige Adrian	—	—
Do.	...	Duragodahena, &c.	..	Siyambalagoda	...	12	60, 61, 63, 65, 71, 73, 74, 75, 76, 119, 53, 78, 79, 81	364	3	36	—	—	—
Do.	...	Potuwilgodadeniya, &c.	...	Siyambalagoda	...	12	129, 130, 130½, 131, 139	1,432	1	18	—	—	—
February 7, 1902	...	Weralugasmullehena	...	Beralapanatara	...	33	33	5	3	11	(1) Wikramanarayana Don Carolis, (2) Mahappubadalge Don Juwanis, (3) Wikramanarayana Dines, (4) Lokuruge Nicholas, (5) Egodage Luwis, (6) Lokuruge Don Juwanis, (7) Mahappubadalge Kaluhami; (8) Kongala Don Charles Abeyaratna, (9) Kongalage Karaluhami, (10) Kongalage Juwanis, (11) Kongalage Thomishami, and Badalge Anagihami	—	—
February 14, 1902	...	Udumullehena, &c.	...	Dehigaspe	...	29	49, 52, 53	466	3	3	(1) D. W. Gunaratna, (2) Kodituwakku Bandawaka Arachchige Punchihami, (3) Don Bastian de Silva Wiraratna, and (4) Appuhennedige Don Charles de Silva	—	—
Do.	...	Pallekandedeniya, &c.	...	Siyambalagoda	...	12	114, 144, 147, 149, 150, 151, 152, 154, 155, 156, 176, 188, 203, 206,	2277	2	18	—	—	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent. A. R. P.	Claimants (if any).	Remarks.
February 14, 1902	Rilatanaketiyehena, &c.	Dampahala	20	5	102 1 25	(1) Giganakankanan Lokuliyanage Don Luwis, (2) Kankananvitaranage Don Andris, (3) Gigana Wanniachchige Garuhami, (4) Giganakankanange Don Andris, (5) Giganakankanange Babanappu, Giganage Kiriappu, (7) Patinayakage Andrian Appu, (8) Giganawanniachchige Juwanis, (9) Giganage Sidanhami, (10) Giganage Baba, (11) Giganage Kaluappu, (12) Jayalatpatiranage Don Mathes, (13) Giganakankanange Don Bastian, (14) Ataudapatiranage Simanhami, (15) Giganage Babehami, (16) Giganage Andris, (17) Giganakankanange Menik Appu, (18) Hendrik Diyas Ferdinandis Abegunasekara, (19) Giganage Dassan, (20) Giganakankanange Janis, and (21) Giganage Dingi Appu	—
Do.	Boroluweindihena, &c.	Urubokka	23	40½	72 2 20	(1) Tantirigé Hinni, (2) Tantirigé Ukkuwe, (3) Tantirige Tantirige Juan, and (4) Tantirige Babe	—
Do.	Niyangamalahena, &c.	do.	23	45, 46, 47, 48	179 2 24	Don Nikulas Abewikkrama	—
Do.	Ambagahahenamukalana, &c.	do.	23	106	64 2 20	(1) Halmullage Punchi Appu, (2) Halmullage Babehami, (3) Gamage Dissan, (4) Gamage Ukkuwa, (5) Madanayakage Luwishami, (6) Yakgahawitage Luse, and (8) Ranatunge Andris	—
Do.	Galendahena, &c.	Kotagala	14	18½	63 2 38	Charles Abewikkramasinha Gunawardana Appuhami.	—
February 21, 1902	Puwakhena, &c.	Hewowita	15	1, 3	52 2 19	(1) Amaratunga Vitaranage Dines Appu, (2) Amaratunga Vitaranage Don Dines, and (3) Amaratunga Vitaranage Don Bastian	—
Do.	Hedigodahena	Hattotuwa	13	10	17 0 22	Jasinha Siriwardana Buddadasa	—

February 21, 1902	...	Galabodakanda, &c.	...	Uwaragala	...	11	1, 27, 4, 15, 16	349	1	39	—
Do.	...	Gurubewlehena *alias* Midellahena	...	Weliwe	...	10	49*a*	7	2	20	—
February 28, 1902	...	Mahayayehena, &c.	...	Walakanda and Watukolakanda		5,020	10,544	104	2	14	—
Do.	...	Gurukanattahena, &c.	...	Walakanda	...	5,020	10,545 E 569 10,550 D 569 10,551 F 569 Q 567½	124	1	29	—
Do.	...	Bogahawalahena, &c.	...	Deniyaya *alias* Matugobe	...	4,653	12,868 12,869 12,870	74	0	34	(1) Yamanage Kaluwa, (2) Yamanage Babuwa, (3) Welgangoda Acharige Jiwitte, (4) Badalge Baba, 5) Badalge Gunahami, (6) Badalge Anagihami, (7) Wadumulla Gamachcharige Jayanhami
Do.	...	Yahalawilehena, &c.	...	Pitabeddara	...	6	2*a*, 3*a*, 3*b*, 4, 5, 11, 24	123	2	15	(1) Pitabeddara Vitanage Don Andris, (2) Ranatunga Arachchige Don Cornelis
Do.	...	Masheragodayayehena	...	Dampahala	...	20	71*c*	1	2	30	(1) Alutge Mudalihami, (2) Alutge Dionis, (3) Alutge Carolis, (4) Abewikkrama Liyanage Don Davit, (5) Medanakara Terunnanse, (6) Ratnapala Terunnanse, (7) Don Andris Manamperi Gunawardana, (8) Don Carolis Manamperi Gunawardana
Do.	...	Karandaketiyahena, &c.	...	do.	...	20	110*a*	40	0	0	(1) Alutge *alias* Arampatage Saron Appuhami, (2) Alutge Dingi Appuhami, (3) Alutge Dionis, (4) Don Carolis Manamperi Gunawardana, (5) Abewikramaliyanage Don Davit, (6) Alutge Adiriyan Appuhami, (7) Alutge Dingi Appu, (8) Senanayakage Thomishami, (9) Senaratyapa Kalu Appuhami, (10) Abewardana Don Martinis Appuhami, (11) Alutge Mudalihami, (12) Alutge Don Dines
Do.	...	Masheragodayayehena	...	do.	...	20	71*a*½	32	3	20	(1) Alutge Mudalihami, (2) Alutge Dionis, (3) Alutge Carolis, (4) Abewikkrama Liyanage Don Davit, (5) Madankara Terunnanse, (6) Ratnapala Terunnanse, (7) Don Andris Manamperi Gunawardana, and (8) Don Carolis Manamperi Gunawardana

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent.	Claimants (if any).	Remarks.
					A. R. P.		
February 28, 1902 ...	Ritigalahena, &c. ...	Beralapanatara ...	33	98, 99, 100, 101, 107	239 1. 7	(1) Wijesinkankanange Andrishami, (2) Madarasinge Janishami, (3) Madarasinge Andrishami, (4) Hatharasinge Dassanhami, (5) Hatharasinge Andris, (6) Senanayakage Bandulahami, (7) Don Hendrick Hanti Appuhami, (8) Attadassa Terunuanse, (9) Wijesinkankanange Kalu Appu, (10) Wijesinkankanange Babunhami, (11) Wijesinkankanange Lewishami, (12) Don Andris Perusinha, (13) Wijesinkankanange Kalu Appu, (14) Wijesinkankanange Madduma Appu, (15) Wijesinkankanange Babehami (16) Wijesinkankanange Andrishami, (17) Samarasinhaarachchige Kalinguhami, (18) Wethasinge Don Andris, (19) Wijesinkankanange Andris	—
Do. ...	Bowitiyamandiyahena, &c. ...	Epitakaduwa ...	W. L. O. S. No. 47	A, B, C	27 1 38	Don Juwanis Abeyagunawadana Senarat Yapa	—
Do. ...	Udahitihena, &c. ...	Morawaka ...	40	2, 25	27 0 0	Peter William Perera	—
Do. ...	Batehena, &c. ...	Kotapola ...	45	141*a*	23 3 30	Wellappulige Samiappu	—
Do. ...	Gangodatennahena, &c. ...	Kehelwala ...	32	1	430 0 24	—	—
Do. ...	Dankoratuwa	Gammeddegama ...	W. L. O. S. No. 50	A	30 0 36	—	—
Do. ...	Ihaladeniyekosgahahena	Bambarenda ...	W. L. O. S. No. 66	—	24 3 4	(1) Arachchige Janishami, (2) Samarasekarage Don Pedris, and (3) Arachchige Dineshami	—
Do. ...	Ketakalagahahena ...	Urugamuwa ...	4,536	Portion of 12,510	10 3 20	—	—
Do. ...	Wattehena, &c. ...	Weliwe ...	10	72½	66 0 0	(1) Vitaranapatiranage Don Nikulas, (2) Hettiarachchige Don Diyas, (3) Vitaranapatiranage Dissanappu, (4) Wijesinkankanange Don Andris, (1), Jatunge Nikulashami, (6) S. M. Sedoris, (7) Vitaranapatirange Wattuhami, (8) Vitaranapatirange Don Davit	—
Do. ...	Gurubewlehena, &c. ...	do. ...	10	49, 68½	289 0 0	do.	—

February 28, 1902	...	Achariwiladeniya, &c.	...	Morawaka	...	40	48, 49	16	2	37	James Jasinha Abeyawardana
Do.	...	Pallewattehena	...	do.	...	40	50	5	3	32	—
March 7, 1902	...	Paragahahena	...	Kotagala	...	14	3, 8	17	1	20	—
Do.	...	Maragahahena *alias* Hingurehena	...	Bambarenda	...	W. L. O. S. No. 58	58¹ S. P. 58² A. 58² B.	36	3	10	(1) Amarasinkankanange Don Andris and (2) Punchikankanage Bebehami
						5,100	L 57I				
Do.	...	Debaragaladeniya, &c.	...	Weliwe	...	10	92½, 93, 94, 96, 98, 100, 103, 112, 119, 120, 121, 122, 123, 124, 132*a*, 133, 173, 175, 176	866	3	27	Jasin Patakadagamage Don Dines Appu
Do.	...	Niyangamalahena, &c.	...	do.	...	10	73½, 86½, 87½, 75½	101	0	37	(1) Pahurutotage Don Abarau, (2) Paburutotage Janis, (3) Pahurutotage Thomishami
Do.	...	Kuruntennehena, &c.	...	Kehelwala	...	32	14, 20	46	3	34	—
Do.	...	Batalakoratuwehena *alias* Kapuhenegodella	...	Sapugoda	...	1,593	1,193	6	1	23	Kirige Sami
Do.	...	Piyanpanahena, &c.	...	Gammeddegama	...	W. L. O. S. No. 57	A, B, C, D, E, H, I	102	3	32	(1) Ambalangoda Liyanage Simanhami, (2) Welaboda Hewage Don Bastian de Silva, (3) Hettiachchigamage Loku Appu, (4) Munasinge Salman
Do.	...	Keramullehenakuttiya	...	Pahalawitiyala	...	W. L. O. S. No. 59	1, 2, 3, 4, 5	35	2	27	(1) Hakmanahewage Kaluhami, (2) Uyangoda Ganhewage Babappu, (3) Hewahakmanage Babunhami, (4) Hewa Jasinha Don Obiyas, (5) Ahangama Liyanage Don Juwanis
Do.	...	Galhena	...	Mulatiyana	...	W. L. O. S. No. 37	A	6	1	23	(1) Egodawikramage Andris and (2) Hittetiyege Don Samel
Do.	...	Kotigalahena, &c.	...	Lewpotdeniya	...	31	21, 1	210	1	15	(1) Liyanpatiranage Don Siman, (2) Vidanapatiranage Don Abaron, (3) Ranewirage Subehami, (4) Abewickrama Vidanagamachchige Don Nicholas, and (5) Abewickrama Vidanagamachchige Babunhami.
Do.	...	Hulankannagoda Ambagahahena, &c.	...	Puwakbodaowita	...	30	2, 3	13	2	0	Ranasinge Don Siman
Do.	...	Mahayayehena	...	Parapamulla	...	W. L. O. S. No. 63	A, B	1	3	16	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent. A. R. P.	Claimants (if any).	Remarks.
March 22, 1902	Katuimbulehena, &c.	Weliwe	10	29, 91½	40 0 25	(1) Vitaranapatiranage Don Nikulas, (2) Hettiarachchige Don Diyas, (3) Vitaranapatiranage Dissan Appu, (4) Wijesinkankanage Don Andris, (5) Jatunge Nikulashami	—
Do.	Mimanakoladeniyakele	Uda Aparekka	5,020	10,549	10 0 15	—	—
Do.	Tippalehena, &c.	Ganegama	W. L. O. S. No. 84	A, B	71 0 32	(1) Malawara Arachchige Don Juanis and (2) Malawara Arachchige Don Abraham	—
May 2, 1902	Kahambiliyahenyaya	Hattotuwa	13	1	83 2 20	Jasinha Siriwardana Buddadasa	—
Do.	Nawalahenawatta, Nawalahena	Uwaragala	11	22, 23	21 2 28	—	—
Do.	Panniddarakumbura	Maramba	4,709	M 494.	0 3 5	C. J. R. Le Mesurier	—
Do.	Nawalamedagoda Boruppahena	Idandukita	25	56½	2 3 36	Rubasin Jayawardanage Don Carolis	—
May 16, 1902	Edandawalahena, &c.	Urubokka	23	6, 7	9 3 6	—	—
Do.	Hindagasdeniya, &c.	do.	23	94, 100, 101, 102	353 3 24	(1) C. L. M. Shroff Mohamad Mowjood, (2) Mohamad Haniffa Shawul Hameed, (3) Alutge Don Carolis, (4) Gamage Siman, (5) Gamage Ukkuhami, (6) Alutge Don Dines, (7) Ranatunge Andris, (8) Gamage Andris, (9) Gamage Simanhami, (10) Abewickrama Jasinha, (11) Gamage Dissanhami, (12) Gamage Luwishami, (13) Vidanakankanange Dionis, (14) Vidanakankanage Dowanhami, (15) Siriwardane Vidanage Don Andris, (16) Vidanakankanage Jayanhami (17) Vidanakankanange Senarathami	—
Do.	Mellagahahena *alias* Mitinidegehena, &c.	Howpe	W. L. O. S. No. 69	2, 3	31 2 12	(1) Kandauda Arachchige Abeynayaka Dharmaratna, (2) I. L. M. M. I. L. Marikar, (3) Hinidum Liyanage Don Davit	—

May 16, 1902	...	Galpottedeniya, &c.	...	Urubokka	...	23	53, 80, 87, 93	286	0 18	(1) Alutge Don Carolis, (2) Gamage Simanhami, (3) Gamage Ukkuhami, (4) Alutge Don Dinis, (5) Ranatunge Andris, (6) Gamage Andris, (7) Gamage Simanhami, (8) Abewikkrama Jasinha, (9) Gamage Dissanhami, (10) Gamage Lewishami, (11) Vidanakankanange Dionis, (12) Vidanakankanange Dowanhami, (13) Siriwardane Vidanage Don Andris, (14) Vidanakankanange Jayanhami, (15) Vidanakankange Senarathami	—
Do.	...	Migahahena	...	do.	...	23	38	11	0 20	Ataudage Babunhami	—
Do.	...	Kankanigehena, &c.	...	do.	...	23	48½, 50½, 51½	27	1 10	(1) Halmullage Punchiappu, (2) Halmillage Baba, (3) Madanayakage Adrian, (4) Kalugalage Babun Appu, (5) Amarakonge Kiriappu, (6) Kalugalage Settuhami	—
Do.	...	Meda-aturehena, &c.	...	do.	...	23	104	42	1 30	do.	—
Do.	...	Appuwagehena *alias* Palliyagehena	Malgorakahena	Kanattegoda	...	4,639	12,813½	11	3 6	—	—
Do.	...	Appuwagehena, &c.	...	do.	...	4,639	12,809 12,810 12,811 12,813 12,814 12,815 12,813¾	21	1 26	—	—
Do.	...	Masdeniyehena, &c.	...	Urubokka	...	23	20, 10, 30½, 25½	57	3 4	(1) Don Nikulas Abewikkrama, (2) Kandauda Arachchige Samichchi de Silva, (3) Jahintantirige Luwis	—
Do.	...	Talgaspitiyedeniya, &c.	...	Siyambalagoda	...	12	112, 157	27	2 12	(1) Dewarakkita Terunnanse, (2) Mahagamage Kiriappu, (3) Mahagamage Abaran	—
Do.	...	Wirasinkandatennapitahena, &c.	...	do.	...	12	81½ 82 83 84 95	1,154	3 37	—	—
Do.	...	Ilukhena	...	Kohuliyadda	...	W. L. O. S. No. 20	C	3	0 35	(1) Udukawegamage Babehami, (2) Hewabambarendage Wattuhami	—
June 20, 1902	...	Berawamullehena *alias* Kalamullahena, &c.		Elgiriya	...	1,475	12,709 12,710	147	2 18	—	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent.	Claimants (if any).	Remarks.
					A. R. P.		
June 20, 1902 ...	Masmullekele ...	Akurugoda	4,123	Portion of 10,700 A	18 2 39	—	—
				Portion of 10,700 B			
Do. ...	Hulankandahena, &c. ...	Puwakbodaowita ...	30	1, 25	213 2 17	—	—
Do. ...	Rukkattanahena, &c. ...	Siyambalagoda ...	12	191	234 2 15	(1) Jayawiragamage Don Juwanis, (2) Dewamitta Terunnanse, (3) Jayawiragamage Don Abaran, (4) Wellappulige Don Bastian, (5) Wellappulige Don Samel	—
July 4, 1902 ...	Galgodahena ...	Parapamulla ...	4,624	12,755	20 0 20	—	—
Do. ...	Dolamullahenyaya ...	Kiripitiya ...	3	23	102 2 0	—	—
Do. ...	Berubeulemukalana ...	Kiripitiya ...	3	22	37 1 0	—	—
Do. ...	Gallenehena, &c. ...	Mologgamuwa ...	19	33	10 0 5	—	—
Do. ...	Talgasmullehena ...	Bengamuwa ...	18	100	9 2 37	—	—
Do. ...	Masmullekele ...	Mapalana ...	4,123	Portion of 10,700	88 3 0	—	—
July 11, 1902 ...	Gulanehenedeniya, &c. ...	Maliduwa ...	5,216	11,265	467 2 16	—	—
				11,266			
				11,268			
				11,269			
July 18, 1902 ...	Masmullekele, &c. ...	Kahagala ...	4,123	Portion of 10,700	713 2 22	(1) J. P. Ekanayaka, (2) Hinipellege Hatana, (3) Hinipellege Dinanchiya	—
				10,388			
				10,392			
				10,393			
				10,394½			
Do. ...	do.	Kirinda ...	4,123	Portion of 10,700	547 0 27	—	—
				10,434			
			4,112	10,435			
				10,436			
				10,437			
				10,477			
			4,118	10,482			
				10,483			
			4,116	10,471			
Do. ...	Eviladeniya, &c. ...	Kohugoda ...	4,336	11,428	110 2 8	—	—
Do. ...	Masmullekele, &c. ...	Urapola ...	5,216	11,267			
			4,123	Portion of 10,700	86 1 29	(1) Hinipellege Hatana, (2) Hinipellege Dinanchiya	—
			4,119	10,485			
				10,487			
Do. ...	Kanamiyagalahena, &c. ...	Lenama ...	W. L. O. S. No. 60	V	53 3 35	Don Juwanis Samarasinha Disanayaka	—

July 18, 1902	...	Puhulhena	...	Kadawedduwa	...	4,396	11,605	33	0	31	—	—
Do.	...	Kanakadurumullehena	...	Pasgoda	...	21	62	11	1	27	Yamange Babuwa ...	—
July 25, 1902	...	Diganwilakele, &c.	...	Derangala	...	27	1, 1A, 1½, 2, 2½, 3, 3½, 4, 4½, 5, 5½, 6, 6½, 7, 8, 9, 10, 10½, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 1B	2,347	2	16	(1) Edirisinha Don Davit, (2) Charles Perera Wijitunga	—
Do.	...	Wanaidalaketiyehena	...	Dampahala	...	20	5A	9	0	20	—	—
Do.	...	Nathawalagodahena	...	Bengamuwa	...	18	1	35	0	24	—	—
Do.	...	Pansalagodella, &c.	...	do.	...	18	201	22	3	20	—	—
Do.	...	Degalankele	...	do.	...	18	194A	44	2	0	—	—
August 1, 1902	...	Medagodahena, &c.	...	do.	...	18	189	30	2	17	—	—
Do.	...	Ellagawahena	...	Siyambalagoda	...	12	1c	2	0	0	(1) Lewpotdeniyege Dingihami, (2) Boruppege Don Dines, (3) Galappatige Dionis de Silva	—
August 8, 1902	...	Bataketiyemahahena, &c.	...	Pelle Aparekka	...	W. L. O. S.	B, C	15	3	25	(1) Amarasinha Arachchige Don Lewis, (2) Gajanayaka Mudalige Don Dionis	—
Do.	...	Pilledolehena	...	Malagoda	...	W. L. O. S. No. 107 S. P.	2	8	2	31	(1) Dapandurage Babiya, (2) Dapandurage Odris, (3) Wigangodage Tapenis, (4) Dapandurage Emanis	—
Do.	...	Waralgewattahena	...	Pasgoda	...	21	110	15	1	22	—	—
Do.	...	Kandaheneatura, &c.	...	Bengamuwa	...	18	18, 19, 21, 23, 27, 35, 192A, 196, 72	181	0	8	—	—
Do.	...	Galgodahena, &c.	...	do.	...	18	33, 38, 39, 41	52	0	8	—	—
Do.	...	Horehena	...	Panakaduwa	...	17	37	30	1	22	—	—
August 22, 1902	...	Pahurutotakoratuwa, &c.	...	Siyambalagoda	...	12	4, 6, 7	10	0	34	(1) Don Floris de Silva Abeyawardana, (2) Abewickrama Batagodage Don Andris	—
Do.	...	Kurunduwatta	...	do.	...	12	10	3	1	32	—	—
Do.	...	Neborukanda and Dikhenyaya	...	Balukawala	...	4,927	14,147	245	3	13	—	—
Do.	...	Udugangulkeleyaya *alias* Karawilahena	...	Aturaliya	...	4,927	A 560	55	0	0	—	—
Do.	...	Dikiriwalahena, &c.	...	Mologgamuwa	...	19	66, 72	89	3	37	—	—
Do.	...	Titwala-atura	...	Beralapanatara	...	33	475	26	3	15	—	—
Do.	...	Ambalamagawahena, &c.	...	Pasgoda	...	21	83, 86, 92, 131	160	2	21	—	—
Do.	...	Heenwila, &c.	...	do.	...	21	109, 115, 116, 117	33	1	30	—	—
Do.	...	Wanduruwattehena, &c.	...	do.	...	21	128, 129	11	2	20	—	—
Do.	...	Mahawalagawadeniya	...	do.	...	21	113	1	2	34	—	—
Do.	...	Polatukandamukalana, &c.	...	Panakaduwa	...	17	19, 26, 43	369	1	6	—	—
Do.	...	Hangarantharahena, &c.	...	do.	...	17	35	38	1	20	—	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent.	Claimants (if any).	Remarks.
					A. R. P.		
August 29, 1902 and September 5, 1902	Kandegedarawattahena, &c.	Mologgamuwa	19	51, 58	60 2 6	—	—
Do.	Puhulhenakanda, &c.	Beralapanatara	275	2,139 2,139*c* 2,140 2,140*b*	265 0 28	Jagodage Naidehami	—
Do.	Mugunahena, &c.	Mologgamuwa	19	22, 50	191 1 24	—	—
Do.	Meegaswatteatura, &c.	do.	19	1, 3, 8	185 2 5	—	—
Do.	Illukketiyehena	Dankoluwa	7	9, 10	4 3 10	—	—
Do.	Midigahahena, &c.	Pasgoda	21	52, 66, 67	129 0 14	—	—
Do.	Mahadolehena, &c.	do.	21	3, 6, 7, 16, 18, 19, 145	778 3 34	—	—
Do.	Polgasmulledeniya, &c.	Panakaduwa	17	12, 13, 14, 25, 23	10 3 27	—	—
Do.	Nilwellagalahenamukalana, &c.	Beralapanatara	33	525, 551, 552	251 1 35	—	—
Do.	Panditakumburedeniyeatmaga, &c.	Ehalapitigama	47	4, 5, 15, 16, 17, 18, 19, 8	426 1 20	—	—
Do.	Masmullekele, &c.	Medawiyangoda	4,123 4,121	Portion of 10,700, 10,502	610 3 23	Charles A. Wirasinha	—
Do.	Hulankannagodahena *alias* Welegodahena	Dehigaspe	29	25	12 2 39	—	—
Do.	Paragahaliyaddeokanda, &c.	Mologgamuwa	19	18, 20, 25, 26, 27	141 0 33	—	—
Do.	Dolayayehena, &c.	Beralapanatara	33	390	25 3 10	—	—
Do.	Nakumburemukalana, &c.	do.	33	484	53 0 12	—	—
Do.	Batagodahena	Waturakumbura	28	13	13 2 21	—	—
September 12, 1902	Mahawileokanda, &c.	Paragala	16½	50, 52, 62	8 3 22	—	—
Do.	Kalawititennehena, &c.	Panakaduwa	17	38, 10, 11, 24	20 1 0	—	—
September 26, 1902	Udumullehena	Batuwita	W. L. O. S. No. 98	1	12 2 34	(1) Niwitigala Sobita Terunnanse, (2) Dewanarayanage Babunhami	—
			S. P.				
Do.	Masmullekele, &c.	Uduwe	4,123 4,120 4,119	Portion of 10,700 10,494 10,498 10,488 10,489 10,490 10,491 10,492 10,493	52 1 34	(1) Hewahinnepellege Hatana, (2) Hewahinnepellege Dinanchiya, (3) Hewahinnepellege Baiya, (4) Dolamullege Sinchia, (5) Lahandapurage Deonisa, (6) Hewahinnepellege Jandrisa, (7) Lahandapurage Edandirisa, (8) Hewapematuge Emanisa, (9) Sinhapurage Amaris, (10) Hinnepellege Dana, (11) Lahandapurage Sanda, (12) Dolamullege Sando	—
Do.	Ramahettikandehena, &c.	Dehigaspe	29	54, 9, 57	14 3 0	—	—

October 3, 1902	...	Hiwalgalahena, &c.	...	Beralapanatara	...	33	397, 521, 581, 469	9 0 19	—	—
Do.	...	Wilpitadeniya, &c.	...	Dangala	...	24	77, 84	6 0 17	—	—
Do.	...	Tanahitiyamullehena, &c.	...	Beralapanatara	...	33	66, 102, 382	6 3 1	—	—
Do.	...	Urubokkehena, &c.	...	do.	...	33	4, 76, 105, 108, 162, 199, 354, 355, 540, 573	13 0 17	—	—
Do.	...	Maddittehena, &c.	...	Bengamuwa	...	18	103, 109	52 2 7	Talawege Hine ...	—
Do.	...	Katutiyambarawehena, &c.	...	Mologgamuwa	...	19	54, 30, 31	13 0 11	Hettiachchige Don Elias ...	—
Do.	...	Godaudahena	...	Pasgoda	...	21	130	6 0 22	(1) Muramudalige Don Hendrick, (2) Siribaddanage Don Hendrick	—
Do.	...	Kongahahena, &c.	...	Mologgamuwa	...	19	37, 36	8 3 27	Samaraweeragamage Janis ...	—
Do.	...	Katuimbulgahadeniya, &c.	...	do.	...	19	15, 17	13 0 22	Mologgamuwa Hettige James Appu	—
Do.	...	Patiranage Bewlahenawattahena, &c.	...	Dangala	...	24	33, 32, 9	6 0 4	—	—
Do.	...	Wisakawahena, &c.	...	Dehigaspe	...	29	67, 50, 70, 47	6 2 38	—	—
Do.	...	Ankendehena, &c.	...	do.	...	29	43, 15, 36	9 2 18	—	—
Do.	...	Medakattiya, &c.	...	Ehalakanda	...	37	17, 18	6 2 5	—	—
Do.	...	Mahawila, &c.	...	Dangala	...	24	13, 21, 30	7 2 11	—	—
Do.	...	Kiriwanagodawattahena, &c.	...	do.	...	24	17, 18	8 0 24	—	—
Do.	...	Mahawiladeniya, &c.	...	do.	...	24	8, 15	6 2 26	—	—
Do.	...	Wiharawattahena, &c.	...	do.	...	24	52, 97	6 0 0	—	—
Do.	...	Gurubewlehena, &c.	...	Puwakbodaowita	...	30	23, 6	14 0 18	—	—
Do.	...	Godakoratuwa, &c.	...	do.	...	30	16, 13, 10, 7	7 3 37	—	—
Do.	...	Ratambalahengoda, &c.	...	Ginnaliya	...	22	166, 152	12 0 7	—	—
Do.	...	Kurutota-atura, &c.	...	do.	...	22	218, 54	47 1 12	—	—
Do.	...	Pinnaketiyehenyaya	...	do.	...	22	120	65 0 5	—	—
Do.	...	Urapenunkandemukalana, &c.	...	do.	...	22	217, 149	12 2 2	—	—
Do.	...	Getaudahenyaya, &c.	...	do.	...	22	18, 19	66 3 8	—	—
Do.	...	Gurugodella, &c.	...	do.	...	22	171, 142	10 3 38	—	—
Do.	...	Hediwattehenyaya, &c.	...	do.	...	22	82, 219	275 1 5	—	—
Do.	...	Naketiyeatura, &c.	...	do.	...	22	77, 78	34 3 7	—	—
Do.	...	Nugagahahena	...	Bengamuwa	...	18	170*a*	15 3 11	(1) Gammachcharige, Andris, (2) Gammachcharige Adirian, (3) Wickramanarayanamestrige Silinduhami, (4) Gammachcharige Andris	—
October 24, 1902	...	Polkolatennehena, &c.	...	Beralapanatara	...	33	389, 598, 611, 445	12 1 35	—	—
Do.	...	Udadeniya-aturuyaya, &c.	...	Ginnaliya	...	22	3, 5, 6, 11, 12	165 1 25	—	—
November 14, 1902	...	Niyangamalahena	...	Siyambalagoda	...	12	34	65 0 16	Don Bastian de Silva Wiraratna	—
Do.	...	Alahengoda	...	Lenama	...	W. L. O. S. No. 60	P	4 3 20	(1) Don Johanis Samarasinha Disanayaka, (2) Don Gabriel Wanigaratna Manamperi Gunawardana	—
November 28, 1902	...	Andawilamodaradeniya, &c.	...	Banagala	...	26	71, 72, 80, 9, 9, 106, 44*a* 45, 48, 46, 47	19 3 35	—	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent. A. R. P.	Claimants (if any).	Remarks.
November 28, 1902	Medahena, &c.	Watukolakanda	5,020	V 568, 10,548, B 569, 10,546	146 2 3	(1) Don Andris Abeyawardana Wickramasinha, (2) Don Carolis Samarajiwa Siriwardana	—
Do.	Suddratakagahahena	do.	5,020	P 567¼	4 0 8	Don Andris Abeyawardana Wickramasinha	—
Do.	Wanduruwattehena, &c.	Urubokka	23	42½, 43	15 0 27	—	—
Do.	Laulugahahenyaya, &c.	Beralapanatara	33	357, 356, 415, 424, 461, 462, 463, 616, 617	13 1 4	—	—
Do.	Medadeniya	Ginnaliya	22	133	0 2 10	—	—
Do.	Ittabengodellahena	Warakapitiya	1,564	823	11 0 38	—	—
Do.	Baddamwalahena	Urubokka	23	22½	5 3 10	—	—
Do.	Karawketiyehena	Beralapanatara	33	14	1 2 32	—	—
Do.	Puwakwattedeniya, &c.	Urubokka	23	68, 70	5 1 0	—	—
Do.	Nakandagodahena	Malimada	4,745	13,404	18 1 33	—	—
Do.	Wattagawadeniya	Banagala	26	27	2 3 0	—	—
Do.	Dalukgalakele	Ketanwila	5,359	11,857, 11,858, 11,859, 11,860, 11,861, 11,862, 11,862½, 11,863, 11,864, 11,865, 11,869, 11,868, 11,871, 11,872, 11,873, 11,874, 11,875, 11,876, 11,877, 11,878, 11,879, 11,880, 11,881, 11,882, 11,883	39 0 37	—	—

November 28, 1902	Dalukgalakele, &c.	Ehalape	5,359	11,884 11,885 11,886 11,887 11,888 11,889 V. 586 11,890 11,891 11,892 11,893 11,894 11,895 11,896 11,897 11,898 11,899 11,900 11,901 11,902 11,904 11,905 11,906 11,907 11,913 11,916 11,917. 11,918	183	2	1	—	—	—
Do.	Hapugahalandehena	Beralapanatara	33	123	3	1	0	—	—	—
December 5, 1902	Okandahena	Banagala	26	19	1	0	21	—	—	—
Do.	Hitigahahena	do.	26	91	2	2	7	—	—	—
Do.	Polkandadeniya	do.	26	81	2	1	4	—	—	—
Do.	Pitakanda	Ampanagala	38	12	438	2	34	—	—	—
Do.	Owilangodahena	Elamaldeniya	42	12	23	1	0	Sumangala Terunnanse	—	—
Do.	Diddeniyehena, &c.	Pasgoda	21	2, 48	69	2	8	(1) Mutukuttukankanange Don Bastian, (2) Mutukuttukankanange Janis, (3) Mutukuttukankanange Juwanis, (4) Mutukuttukankanange Carolis	—	—
Do	Talgahaudakoratuwa	Siyambalagoda	12	30	14	3	3	(1) Daluwattege Don Pedris, (2) Hewaweligodage Luwis, (3) Kaluachchige Don Sinnoris, (4) Kaluachchige Don Andris, (5) Hewaweligodage Don Juwanis	—	—
Do.	Bambarawelketiyehena, &c.	Banagala	26	1, 2, 12, 13, 14, 15, 16, 21, 25, 26	226	1	13	Hewatennege Babune	—	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent.	Claimants (if any).	Remarks.
					A. R. P.		
December 5, 1902 ...	Telkekunagodahena, &c. ...	Siyambalagoda ...	12	25½, 33, 74½, 80	150 1 38	(1) Hewaweligodage Luwis, (2) Hewaweligodage Don Juwanis, (3) Kaluachchige Don Sinnoris, (4) Kaluachchige Don Andris	—
Do. ...	Yondehigahahenyaya, &c ...	Elamaldeniya ...	42	1, 16, 21	1032 2 33	—	—
					26526 2 14		
Hambantota District.							
April 25, 1902 ...	Nugehena ...	Yahalamulla ...	4,776	13,518	8 1 17	—	—
September 5, 1902 ...	Wirawila and Lunuganwiharamukalana	Wirawila Lunuganwihara ...	4,977	14,373	417 1 0	—	—
Do. ...	Lunuganwiharamukalana ...	Lunuganwihara ...	4,977	14,378	5,028 0 0	—	—
Do. ...	do. ...	do. ...	4,977	14,375	275 1 20	—	—
Do. ...	Wirawilakele ...	Wirawila	4,977	14,372	2,095 0 0	—	—
Do. ...	Lunuganwiharemukalana ...	Lunuganwihara ...	4,977	14,374	482 0 0	—	—
September 19, 1902 ...	Gonadeniyemukalana ...	Debakkawa	3,718	8,982	376 0 0	(1) Panabokkege Ranhami, (2) Panabokkege Don Andris, (3) Manamperiachchige Odirishamy, (4) Etabatuwa Gamage Wattuhami, and (5) Hewakalugamage Babahami	—
October 3, 1902 ...	Mahanaguliswaladeniya ...	Gonadeniya ...	3,718	9,004	0 0 14	do. ...	—
Do. ...	Mahamagamukalana or Galboralassalangaserugahahena	do. ...	3,718	8,991	8 1 38	do. ...	—
Do. ...	Peniwelhenekella ...	do. ...	3,718	8,998	28 0 0	do. ...	—
Do. ...	Mahamagamukalana ...	do. ...	3,718	8,985	51 0 0	do. ...	—
Do. ...	do. ...	do. ...	3,718	8,989	19 0 0	do. ...	—
Do. ...	Arahenakoratuwa and Morękanhena ...	do. ...	3,718	9,002	0 2 31	do. ...	—
Do. ...	Mahamagayaya ...	do. ...	3,718	9,000	1 1 22	do. ...	—
Do. ...	do. ...	do. ...	3,718	9,003	1 1 2	do. ...	—
Do. ...	Gonadeniyamukalana ...	do. ...	3,718	8,983	335 0 0	do. ...	—
Do. ...	Mahamagayayanaguliswalahena, &c. ...	do. ...	3,718	8,999	151 2 32	do. ...	—
November 28, 1902 ...	Mahamagamukalana ...	do. ...	3,718	8,990	5 3 24	(1) D. M. A. W. Disanayaka, (2) Hewakalugamage Babahami, and (3) Netulpitiye Ratnapala Terunnanse	—
Do. ...	Walagawahena ...	do. ...	3,718	8,987	22 0 0	(1) Panabokkage Ranhami, (2) Panabokke Don Andris, (3) Hewakalugamage Babahami, (4) Netulpitiye Ratnapala Terunnanse, (5) Manamperiachchige Ordiris, and (6) Etabatuwegamage Wattuhamy	—
Do. ...	Galagawahena, &c. ...	do. ...	3,718	8,986	19 0 0	do. ...	—
Do. ...	Mahamagamukalana ...	do. ...	3,718	8,984	23 1 20	do. ...	—

November 28, 1902	Thanaththama-ara, &c.	Gonadeniya	3,718	8,988	9 1 2	(1) Panabokkage Ranhami, (2) Panabokke Don Andris, (3) Hewakalugamage Babahami, (4) Netulpitiye Ratnapala Terunnanse, (5) Manamperiachchige Odris, and (6) Etabatuwegamage Wattuhamy	—
Do.	Maragamanahena *alias* Mahamagamukalana	do.	do.	9,001	20 2 5	do.	—
					9,378 2 27		
EASTERN PROVINCE. Nil.							
NORTH-WESTERN PROVINCE.							
Kurunegala District. Nil.							
Puttalam District.	Unavelikadu	Unaveli village in Puttalam pattu of Puttalam division	1,167	6,200	4 0 15	—	—
	do.	do.	1,167	6,201	9 1 35	—	—
	do.	do.	1,167	6,202	4 0 13	—	—
	do.	do.	1,167	6,203	9 0 28	—	—
	do.	do.	1,167	6,204	9 0 21	—	—
	do.	do.	1,167	6,205	3 2 35	—	—
	do.	do.	1,167	6,206	9 0 20	—	—
	do.	do.	1,167	6,207	9 0 30	—	—
	do.	do.	1,167	6,208	9 0 22	—	—
	do.	do.	1,167	6,209	4 0 24	—	—
	do.	do.	1,167	6,210	7 3 8	—	—
	do.	do.	1,167	6,211	7 2 37	—	—
	do.	do.	1,167	6,212	7 2 31	—	—
	do.	do.	1,167	6,213	7 2 32	—	—
	do.	do.	1,167	6,214	2 2 31	—	—
	do.	do.	1,167	6,215	10 0 22	—	—
	do.	do.	1,167	6,216	10 0 24	—	—
	do.	do.	1,167	6,217	10 0 29	—	—
	do.	do.	1,167	6,218	10 1 8	—	—
	do.	do.	1,167	6,219	8 2 32	—	—
	Ambalaveiikadu	Ambalaveli village in Puttalam pattu of Puttalam division	1,652	I 700	93 3 29	—	—
	do.	do.	1,652	J 700	166 0 0	—	—
	Aliyanpatuatuathaikadu	do.	1,652	K 700	11 0 35	—	—
	Marichchakattiathaikadu	do.	1,652	L 700	4 0 13	—	—
	Unavelikadu	Madurankuli village in Puttalam pattu of Puttalam division	1,652	I 701	39 2 25	—	—
	Patatiyatuattankara	do.	1,652	J 701	20 0 18	—	—
	do.	do.	1,652	K 701	19 1 30	—	—
	Unavelikadu	do.	1,652	L 701	175 0 0	—	—
	do.	do.	1,652	M 701	123 1 0	—	—
	Muniyankandalattukadu	do.	1,652	N 701	16 1 32	—	—
	do.	do.	1,652	O 701	12 3 21	—	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent. A. R. P.	Claimants (if any).	Remarks.
	Unavelikadu ...	Madurankuli village in Puttalam pattu of Puttalam division	1,652	P 701	38 1 39	—	—
	Marichakattaiattukadu ...	do. ...	1,652	Q 701	7 3 35	—	—
	do. ...	do. ...	1,652	R 701	9 2 12	—	—
	Unavelikadu ...	do. ...	1,652	S 701	138 2 23	—	—
	do. ...	do. ...	1,652	T 701	17 2 24	—	—
	Marichakattiattukadu ...	do. ...	1,652	U 701	4 1 20	—	—
	do. ...	do. ...	1,652	V 701	6 1 34	—	—
	Unavelikadu ...	do. ...	1,652	W 701	28 2 6	—	—
	do. ...	do.	1,652	X 701	44 2 23	—	—
	Marichakattikulam ...	Ambalaveli village in Puttalam pattu of Puttalam division	1,652	Y 701	211 3 10	—	—
	Marichakattikadu ...	do. ...	1,652	Z 701	381 0 0	—	—
	—	Madurankuli village in Puttalam pattu of Puttalam division	1,664	L 702	6 0 37	—	—
	—	do. ...	1,664	N 702	6 3 9	—	—
	Periyawelikadu ..	do. ...	1,664	O 702	7 0 21	—	—
	do. ...	do. ...	1,664	O 702½	0 3 4	—	—
	Unavelikadu ...	do. ...	1,664	R 702	97 1 2	—	—
	Unavelichena ...	do. ...	1,664	S 702	8 3 18	—	—
	Unavelikadu ...	do. ...	1,664	U 702	4 1 31	—	—
	do. ...	do. ...	1,664	X 702	14 3 6	—	—
	Periyavelikadu ...	do. ...	1,664	Y 702	11 1 38	—	—
	Olimardukadu ...	do. ...	1,664	A 703	3 0 22	—	—
	Ichila-atankara ...	do. ...	1,664	B 703	9 3 13	—	—
	Karaputti ...	do. ...	1,664	D 703	45 2 35	—	—
	Unavelikadu ...	do. ...	1,664	F 703	2 1 17	—	—
	Unavelichena ...	do. ...	1,664	K 703	18 1 4	—	—
	Unavelikadu ...	do. ...	1,664	M 703	11 2 33	—	—
	Aliyanpalnatuatankara ...	do. ...	1,664	N 703	6 1 1	—	—
	do. ...	do. ...	1,664	O 703	2 1 8	—	—
	Unavelikadu ...	do. ...	1,664	P 703	12 1 25	—	—
	do. ...	do.	1,664	Q 703	2 0 35	—	—
	Aliyanpatnatuattukadu ...	do. ...	1,664	Q 703½	1 1 34	—	—
	Tandichola ...	do. ...	1,664	R 703	4 2 10	—	—
	Tandicholachena ...	do. ...	1,664	S 703	9 0 16	—	—
	Aliyanpatnatuattukadu ...	do. ...	1,664	T 703	12 3 15	—	—
	Ambalavelikadu ...	do. ...	1,664	U 703	9 3 0	—	—
	Unavelichena ...	do. ...	1,664	V 703	0 1 17	—	—
	do. ...	do. ...	1,664	V 703½	0 0 17	—	—
	Unavelikadu ...	do. ...	1,664	W 703	1 2 21	—	—
	Tandicholachena ...	do. ...	1,664	X 703	1 3 14	—	—
	Unavelikadu ...	do. ...	1,664	Y 703	1 3 5	—	—
	do. ...	do. ...	1,664	Z 703	0 2 39	—	—
	Unavelichena ...	do. ...	1,672	O 706	0 2 1	—	—
	Unavelikadu ...	do. ...	1,672	P 706	0 1 29	—	—

	Unavelichena ..	Madurankuli village in Puttalam pattu of Puttalam division	1,672	Q 706	0	3	17	—	—
	Madurankulikadu ...	do. ...	1,356	7,103	20	0	0	—	—
	do. ...	do. ...	1,356	7,104	6	2	24	—	—
	do. ...	do. ...	1,356	7,105	14	0	23	—	—
	do. ..	do. ...	1,356	7,106	13	1	37	—	—
	do. ...	do. ...	1,356	7,108	13	1	18	—	—
	do. ...	do. ...	1,356	7,109	8	0	30	—	—
	do. ...	do. ...	1,356	7,110	5	3	1	—	—
	do. ...	do. ...	1,356	7,111	13	1	7	—	—
	do. ...	do. ...	1,356	7,112	30	1	32	—	—
	do. ...	do. ...	1,355	7,113	17	3	1	—	—
	do. ...	do. ...	1,356	7,114	19	2	34	—	—
	do. ...	do. ...	1,356	7,115	16	2	30	—	—
	do. ...	do. ...	1,356	7,116	12	3	37	—	—
					2,235	3	34		
Chilaw District.									
March 17, 1902 ...	Pahalakele	Arachchikattuwa in Pasdun korale north	W. L. O. S. No. 25	18 & 19	360	2	15	—	—
August 11, 1902 ...	—	Wilpattuwagama, Petisalegama, Horambegama, Katupotugama, and Halmillawewa	P. P. 2,156	10,598	3,494	1	0	—	—
December 19, 1902 ...	Nochchiwatawanamukalana ...	Nochchiwatawana in Pasdun korale north	P. P. 1,382	7,268	42	1	3	—	—
				Q 126	0	1	12	—	—
				4,950	9	1	14		
				4,951	0	3	7		
				4,952	0	0	22		
				P 126	101	0	20		
				4,953	31	2	23		
				O 126	40	0	28		
				4,954	0	2	21		
				4,955	5	1	9		
				R 126	135	2	0		
				4,956	7	0	17		
North-Central Province.									
November 7, 1902 ...	—	Bogahawewa in Wilachchiya korale of Nuwaragampalata	1,631	S 126	0	3	13	—	—
				T 126	0	2	21		
				V 126	29	0	0		
				Portion of Y 126	0	0	20		
				Z 126	5	3	8		
				4,957	8	2	31		
				A 127	34	0	20		
				4,958	2	1	31		
				B 127	0	1	0		
				4,959	2	1	2		
				N 126	0	0	39		
					416	1	38		

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent.	Claimants (if any).	Remarks.
					A. R. P.		
PROVINCE OF UVA.							
May 27, 1902 ...	Bedde-ellepatana, &c. ...	Wellewela in Dehiwinipalata, Udukinda	18	6	216 1 0	—	—
Do. ...	do. ...	do. ...	18	7	0 2 0	—	—
Do. ...	do. ...	do. ...	18	15	8 2 10	—	—
Do. ...	Deyalduwa, &c. ...	Idame in Dehiwinipalata, Udukinda	17	16	543 0 0	—	—
Do.	Kirindebedda, &c. ...	do.	17	23A	238 3 10	—	—
			16	22	94 0 0	—	—
Do. ...	Galkandepatana, &c. ...	Hinnarangolla in Dehiwinipalata of Udukinda ...	16	23	86 2 15	—	—
Do. ...	Udaulpotakele, &c. ...	Galanihe in Gampaha korale, Udukinda	55	128 to 135	211 3 3	—	—
					1,399 1 38		
PROVINCE OF SABARAGAMUWA.							
Ratnapura District.							
March 8, 1902 ...	Digarollemukalana ...	Tepulangoda ...	971/40	K 116	12 2 26	—	—
June 14, 1902 ...	Galamunagawahena ...	Malangama		7	16 0 20		
Do. ...	Patakandane Arachilage Wattagawahena	do.		8	10 3 0		
Do. ...	Waturagannaelagawahena ...	do.	W.L.O.S.	9	10 0 20	K. M. Punchimahatmaya and others	—
Do. ...	Maragasdeniyehena ...	do.	No. 7	10	15 2 0		
Do. ...	Malanarambehena ...	do.	No. 260	11	4 0 0		
Do. ...	Mahabate or Batehena ...	do.		12	3 1 20		
Do. ...	Malankelemukalana ...	do.		1	184 3 0	—	—
August 25, 1902 ...	do.	do.		17	110 2 30	—	—
Do. ...	Indurehena ...	Noragalla ...	P. P. 21	2	42 2 10	—	—
Do. ...	Pillagaha-atura ...	do. ...	do.	21	23 1 35	—	—
	Moraketiyemukalana ...	Embilipitiyepallegama ..	W. L. O. S. No. 16	393	900 0 0	—	—
Do. ...	Polambawaturamukalana ...	Hakamuwa ...	P. P. 18	18	32 2 24	—	—
Do. ...	Udadaluwamukalana ...	do. ...	do.	20	35 1 30	—	—
Do. ...	Tumbagodamukalana ...	do. ...	do.	21	36 2 37	—	—
September 10, 1902 ...	Palupanguwemukalana ...	Handurukanda ...	29	1	162 3 0	—	—
October 1, 1902 ..	Bulupanduremukalana ...	Dapone ..		2,757	10 3 12	—	—
Do. ..	do. ...	do. ...	988	2,757½	0 3 8	—	—
Do. ...	Kudadeniya *alias* Karawilayayamukalana	do. ...	43	2,758	22 1 0	—	—
Do. ...	do. ...	do. ...		2,758½	0 3 10	—	—
October 24, 1902 ...	Palawelakandehenyaya ...	Palawela ...	745	H 91¼	31 1 6	Romanis Cooray and others	—
Do. ...	do. ...	do. ...	10	H 91½	21 2.26		
					1,689 0 34		
Kegalla District.							
November 26, 1901 ...	Kirindeniyahena ...	Puwakdeniya ...	4,398	9,893	0 2 19	—	—
January 9, 1902 ...	Kabaragala ...	Berannawa ...	4,152	9,330	218 0 0	—	—

January 9, 1902	...	Madampitiyakele	...	Berannawa	...	4,152	9,334	70 2 20	—	—
Do.	...	Gurulugollamukalana	..	do.	...	5,984	7,735	5 3 37	—	—
Do.	...	Halmessahena	...	Medagaladeniya	...	8,015	5,287	3 1 32	—	—
Do.	...	Kahatagastennamukalana	..	do.	...	33	46	45 1 0	—	—
January 17, 1902	...	Andone elamukalane	...	Debegama	...	8,670	7,011¼	20 0 14	—	—
Do.	...	Kitulehenamukalana	...	do.	...	8,670	7,011½	8 2 4	—	—
Do.	...	Kaludiyaelamukalana	...	do.	...	8,670	7,011¾	13 0 18	—	—
January 22, 1902	...	Alakotuwamukalana	...	Boruggomuwa-ambakumbura		620	1,871	14 0 7	—	—
February 3, 1902	..	Welgalekandamukalana	...	Udugama and Puwakmote	...	23	27	90 0 27	Undugodagedara Bandirala and D. M. Sirimalhami of Puwakmote	—
February 4, 1902	...	Pillagawahena or Pillagawaboraluwa	...	Gondiwala	...	7,700	3,869	16 0 29	M. A. Mudalihami of Gondiwala	—
February 6, 1902	...	Welihindamukalana	..	Humbaswalana	...	70	1,312	2 1 18	—	—
Do.	...	Welihindamukalana	...	Dannorukanda	...	70	1,296	66 1 11	I. V. Appuhami and others of Dannorukanda	—
January 27, 1902	...	Kaneiyagalahena	...	Boralankada	...	155	3,420	15 0 0	K. Adonisa and others of Boralankada	—
Do.	...	Rattanapitiyamukalana	...	do.	...	155	3,421	12 3 8	—	—
Do.	...	Moragahalandamukalana or Medahallgollamukalana	...	do.	...	155	3,430	9 2 0	—	—
Do.	...	Mahalandehena	...	do.	...	155	3,432	50 1 0	—	—
Do.	..	Pupakandehenamukalana	...	do.	...	155	3,433	8 2 16	—	—
Do.	...	do.	...	do.	...	155	3,434	16 3 0	—	—
Do.	...	Halkandetennamukalana	...	do.	...	155	3,441	20 1 10	—	—
Do.	...	Tennapitiyamukalana	...	do.	...	155	3,442	21 3 0	—	—
February 11, 1902	...	Maligatenna or Ganegollamukalana	...	Pitagaladeniya	...	7,838	4,672	31 1 16	H. M. M. Perera and others of Pitagaladeniya	—
Do.	...	Yahalahena	...	do.	...	5,126	4,407	11 3 30	—	—
February 4, 1902	...	Migahatennemukalana	...	Puwakdeniya	...	7,676	3,800	3 3 10	D. Mudalihami and others of Puwakdeniya	—
Do.	..	Sudukosgahamulahena	...	do.	...	446	1,155	0 3 12	—	—
Do.	...	Kendagollehena	...	do.	...	5,841	7,345	10 2 3	—	—
April 15, 1902	...	Weralutennehena and 18 other chenas		Humbaswalana	...	74	1,411	309 3 37	W. Dingiriya and others of Humbaswalana	—
March 31, 1902	...	Karawattehenamukalana, Hangurumalamukalana		Telijjagoda	...	519	1,348	22 3 37	S. M. Mohotti Appuhami of Telijjagoda	—
Do.		Hanganemalahena	...	do.	...	519	1,350	0 2 18	—	—
March 3, 1902	...	Telbokulahena	...	Keppitipola	...	8,070	S 447	15 1 5	A. Dingiriya and others of Karapone	—
Do.	...	Hirikindehena	...	do.	..	8,070	Q 447	7 3 2	—	—
Do.	...	Mahapanwattamalapaluwa		do.	....	8,070	5,396	1 1 33	—	—
Do.	...	Aluambehena	...	do.	....	8,070	5,397	5 3 19	—	—
March 31, 1902	...	Kandehena	...	Madawala	...	8,016	5,290	5 2 18	M. Dingiri Menika and five others of Madawala	—
June 13, 1902	...	Kekunemukalana		Yatimahana	...	747	2,195	4 2 28	—	—
Do.	...	Puhulhenemukalana and Adikariwelemukalana		do.	...	747	2,201	3 1 19	—	—
Do.	...	Amuhena or Adikariwelahena	...	do.	...	7,754	4,399	3 1 8	—	—
Do.	...	Metiwalahena	...	do.	...	7,754	4,409	3 0 11	—	—
Do.	...	Gurumaelahenamukalana	...	do.	...	7,754	4,401	1 3 18	—	—
Do.	...	Kurundahappanduwamukalana	...	do.	...	7,754	4,396	10 2 37	—	—
Do.	...	Totapolawattahena	...	do.		7,754	M 402	3 1 14	—	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent.	Claimants (if any).	Remarks.
					A. R. P.		
June 13, 1902	Tottapolawattahena	Yatimahana	7,754	4,395	3 0 33	—	—
Do.	Telbokulahena	do.	7,754	4,394	0 3 6	—	—
Do.	do.	do.	7,754	L 402	2 3 32	—	—
Do.	Miyanakolamadehena	do.	7,754	K 402	2 1 29	—	—
Do.	Moravillahena	do.	8,072	5,398	1 1 34	—	—
Do.	Weliamemukalana	do	8,078	5,416	0 1 31	—	—
Do.	Lindaismattehena	Kumburugama	6,200	8,537	23 2 27	—	—
Do.	Kiriwanehena	do.	6,200	8,540	30 3 36	—	—
Do	Haldolahena	do.	6,200	8,541	3 3 4	—	—
Do.	Timbirigalayayehena	do.	6,200	8,543	23 2 30	—	—
Do.	Timbirigalahena	do.	6,200	8,542	2 3 21	—	—
Do.	Dikdeniyahena	do.	6,200	8,544	72 1 11	—	—
Do.	Baludoluwawehena	do.	6,200	8,545	7 2 28	—	—
Do.	Kiriellaelemukalana and Galtaraihalahena	Urupelauwa	150	3,172	25 2 0	—	—
Do.	Pussahena	Erabaduwala	85	1,594	9 0 32	—	—
Do.	Ambagahamulahena	do.	645	1,972	2 1 19	—	—
Do.	do.	do.	645	1,973	1 2 37	—	—
Do.	do.	do.	645	1,974	3 1 31	—	—
Do.	Erabaduwalamukalana	do.	262	560	1 1 11	—	—
Do.	Erabaduwalamukalana or Jambugahahena	do.	262	566	0 3 33	—	—
June 20, 1902	Ranhitipanamukalana	Algoda	120	2,533	8 0 3	—	—
Do.	do.	do.	712	2,156	3 3 35	—	—
Do.	Pariangalamukalana	Niwatuwa	479	1,229	19 1 5	—	—
Do.	Kandamukalana	do.	479	1,230	11 2 13	—	—
Do.	Madagalamukana	do.	479	1,231	55 1 0	—	—
Do.	Moragollamukalana	do.	479	1,234	3 3 34	—	—
Do.	Do.	do.	449	1,235	0 0 23	—	—
Do.	Olagankandekele	Olagama	7,850	9	65 1 28	—	—
Do.	Do.	do.	7,850	14	11 1 22	—	—
Do.	Olagalekanda	do.	7,850	16	16 3 5	—	—
Do.	Gonawalahena	do.	7,850	17	0 2 27	—	—
Do.	Dikhena	do.	7,850	26	19 3 18	—	—
Do.	Olagankanda	do.	7,850	27	3 0 27	—	—
Do.	Do.	do.	7,850	27¼	0 2 20	—	—
Do.	Olagalakanda	do.	7,850	28	8 0 12	—	—
July 7, 1902	Polgahahena and Weliketiyamukalana	Deraniyagala	229	4,823	32 0 25	—	—
Do.	Darallewitiwellamukalana	do.	229	4,824	136 1 0	—	—
Do.	Nawinnemukalana	do.	221	4,813	32 3 6	—	—
Do.	Horagommanemukalana	do.	283	7,311	1 1 7	—	—
Do.	Kekunatullemukalana	do.	283	7,338	29 2 4	—	—
July 10, 1902	Alpendeniya	Udayogama	231	4,828	103 3 0	—	—
Do.	Kirigalahena	do.	191	4,463	226 2 0	—	—
Do.	Pelpolehena	Gantune	329	817	2 3 28	—	—
Do.	Lawalahena	do.	684	2,090	1 0 9	—	—
Do.	Lapallakandagalamukalana	do.	4,457	10,005	219 1 37	—	—

July 14, 1902	...	Awaradeniya and Batehena	...	Dedigama	...	5,962	7,670	8	1	34	K. Appuhami and others of Dedigama
Do.	...	do.	...	do.	...	5,962	7,670¼	3	0	25	—
Do.	...	Nangallahenakekirihena	...	Vendala	...	34	973	17	3	25	H. Balahami and others of Wendala
Do.	...	Bambarukedeniyahena	...	do.	...	34	972	0	1	30	—
June 30, 1902	...	Dandeniyahenyaya	...	Eregama	...	539	E 67½	0	0	31	—
Do.	...	Pahalapindeniya	...	do.	...	539	F 67	0	2	30	—
Do.	...	Pindeniya	...	do.	...	539	G 67	0	1	37	—
Do.	...	Kirigala or Mahaliyanhenamukalana	...	do.	...	539	1,401	57	2	8	—
Do.	...	do.	...	do.	...	539	1,401½	0	1	0	—
Do.	...	do.	...	do.	...	539	1,402	0	0	16	—
Do.	...	Dandeniyapurana	...	do.	...	539	1,403	0	3	36	—
Do.	...	Kirigalapurana	...	do.	...	539	1,404	0	3	21	—
Do.	...	Udadeniyapurana	...	do.	...	539	1,405	0	1	8	—
Do.	...	Tumbodalandeniya	...	do.	...	539	C 67½	0	0	15	—
Do.	...	Alugollahenyaya or Bowellahenyaya	...	do.	...	539	B 67½	0	0	34	—
July 25, 1902	...	Hapugollemukalana	...	Asmadala	...	6,501	9,800	3	1	17	—
Do.	...	Waturadeniyahena	...	do.	...	8,028	5,322	10	0	6	—
Do.	...	Tuttiriyahena	...	do.	...	8,028	5,323	3	1	27	—
Do.	...	Kandepalle hena	...	do.	...	7,990	5,220	5	3	6	—
Do.	...	Diyagalahena	...	do.	...	7,990	5,221	15	1	33	—
Do.	...	Randunnemukalana	...	do.	...	8,057	5,379	8	1	38	—
Do.	...	Urakanda	...	do.	...	132	880	65	0	0	—
August 6, 1902	...	Batalawattemukalana	...	Tismalpola	...	39	58	3	0	12	—
Do.	...	do.	...	do.	...	39	56	26	1	30	—
August 28, 1902	...	Atalahagalamukalana	...	Pannila	...	7,480	3,292	152	0	0	B. Abanchiya and others of Pannila
Do.	...	Mahawatagalamukalana	...	do.	...	7,480	3,293	175	0	0	—
September 20, 1902	...	Bogahawatta	...	Wakirigoła	...	6,382	9,287	1	3	39	—
Do.	...	Wakirigolamukalana	...	do.	...	6,382	9,288	13	1	26	—
September 29, 1902	...	Medahena and Himbutupola	...	Pambegama and Pukunuwala		6,849	669	274	0	0	—
September 23, 1902	...	Wagollekele	...	Yodagama	...	5,836	7,336	17	2	16	I. Sirimala & others of Yodagama
Do.	...	Wagollemukalana	...	do.	...	7,666	3,788	22	1	13	—
October 29, 1902	...	Halpagodahena	...	Uruledeniya	...	147	238	9	1	20	H. Ukkuwa and another of Uruledeniya
Do.	...	Tungodellahena	...	do.	...	280	593	0	2	28	—
Do.	...	do.	...	do.	...	280	594	1	3	10	—
Do.	...	Weralahenamukalana	...	do.	...	596	1,790	22	0	0	—
Do.	...	do.	...	do.	...	596	1,791	1	2	6	—
Do.	...	Halpagodamukalana	...	do.	...	596	1,792	0	3	9	—
Do.	...	Uruledeniyakanda	...	do.	...	3,724	8,184	17	2	4	—
Do.	...	Kirihenkandamukalana	...	Pelellegama		117	2,462	26	3	28	K. Pieris Appuhami of Pelellagama
Do.	...	Dewalagammana	...	do.	...	117	2,483	2	3	32	—
Do.	...	Pepolgahalandamukalana	...	do.	...	117	2,488	54	0	20	—
Do.	...	Malapaluwa	...	do.	...	2,928	2,049	38	2	0	—
Do.	...	Kowilagahagawahena	...	do.	...	155	3,465	11	3	0	—
Do.	...	do.	...	do.	...	155	3,466	3	3	26	—
Do.	...	Kekulellamukalana	...	do.	...	155	3,475	31	0	0	—
								3,524	0	24	

B.—Annual Return of all Cases of Lots of Forest, Chena, Waste, and Unoccupied Lands which have been referred to Court, and in which there has been a Final Decision in favour of the Crown, under Ordinance No. 1 of 1897, during the Year 1902.

Date of Declaration in favour of the Crown.	Name (if any)	Situation.	No. of Plan.	No. of Lot.	Extent.	Claimants (if any).	Remarks.
					A. R. P.		
WESTERN PROVINCE. Nil.							
CENTRAL PROVINCE. *Kandy District.*							
May 17, 1902 (date of decision of District Judge)	Belungalehenamukalana ...	Halagama in Udapalata ...	Cadastral Plan IX.	13	30 0 25	Murutullegedara Kaluwa and three others	—
Matale District. Nil.							
Nuwara Eliya District. Nil.							
NORTHERN PROVINCE. Nil.							
SOUTHERN PROVINCE. *Galle District.* Nil.							
Matara District.							
February 24, 1902 ...	Hindakaraldeniya ...	Morawaka in Morawak korale of Matara District	3,885	9,651	15 2 0	(1) Wijegunasekera Jasinkorala Arachchige Don Andris Appuhamy, (2) Wijegunasekera Jasinkorala Arachchige Don Juanis, both of Weliwe	9,706
February 27, 1902 ...	Ihalawattagodellahena ...	Bambarenda in Wellaboda pattu of Matara District	W. L. O. S. No. 24	A, C, and D	51 2 36	Hewaradage Babune of Bambarenda	9,687
November 5, 1902 ...	Rukkepuhena and Kitulwitiyalahena...	Gammeddegama in Kandaboda pattu of Matara District	W. L. O. S. No. 57	J, K, L, M, N	69 2 7	Grigoris Fernando Abeysinha Gunasekera Appuhami of Welitara in Bentota-Walallawiti korale	9,773
November 19, 1902 ...	Paragahahena, Paragahalangahena, Kannadimullehena, Kannadimulledeniya, and Wellanegewatteatura	Siyambalagoda in Morawak korale of Matara District	O $\frac{14}{39-47}$	20, 21, and 25	34 1 27	Charles Abeywikkramasinha Gunawardana of Kotagala	9,775
Hambantota District. Nil.							

EASTERN PROVINCE. Nil.								
NORTH-WESTERN PROVINCE. *Kurunegala District.* Nil.								
Puttalam District. Nil.								
Chilaw District. Nil.								
NORTH-CENTRAL PROVINCE. Nil.								
PROVINCE OF UVA. Nil.								
PROVINCE OF SABARAGAMUWA.								
Ratnapura District.								
October 9, 1902 ... D. C., Ratnapura, No. 1,146	Badahelgodakele ..	Badahelgoda ...	414	988	88 0 0	Gamaetirallage Mohattihamy and others	—	
				990	94 3 0			
				992	58 1 25			
				993	379 1 30			
				994	78 3 30			
D. C., Ratnapura, No. 1,066 Agreement signed on October 8, 1902	Pallepitiya or Debanuwemukalana ...	Kalalella ...	10	29	81 1 0	(1) D. S. S. Daundasekara, administrator of the estate of S. A Appuhamy, (2) P. M. P. Silva, (3) R. Brahmanahamy and another	Settled without going to trial by giving claimants 8A. 2R. 12P. out of lot 46	
	Kandanhena or Pannkaranwehena ...			45	20 0 0			
	Karanweowilana ...			46	17 0 24			
	Ellehena or Kattiriyahena ...			70	18 3 15			
	Morandelamahagulana ...			76	243 3 0			
					1,080 2 4			
Kegalla District.								
April 29, 1902 ...	Yammanakandamukalana ...	Kohombadeniya ...	224	4,817	53 3 0	M. Dingirihami and others of Kohombadeniya	—	
September 23, 1902 ..	Gorakagahamadamukalana ...	Waddeniya Lendaramulla Ambakumbura	620	1,870	84 1 30	Siddharta Unnanse and others of Lendaramuila	—	
					138 0 30			

XLI.—1903.

STATEMENT

SHOWING

THE AMOUNT OF FEES RECEIVED BY THE SEVERAL FISCALS

DURING THE YEAR 1902.

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 5 cents.

1903.

FISCALS' FEES.

STATEMENT showing the Amount of Fees received by the Fiscals of the several Provinces agreeably to the 16th clause of the Ordinance No. 4 of 1867 and Ordinance No. 3 of 1890, during the Quarters ended March 31 and June 30, 1902.

Province and District.	Quarter ended March 31, 1902.				Quarter ended June 30, 1902.			
	January.	February.	March.	TOTAL.	April.	May.	June.	TOTAL.
	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
Western.								
Colombo ...	—	—	—	—	607 85	772 50	664 0	2,044 35
Negombo ...	137 60	191 25	175 75	504 60	187 75	229 25	228 50	645 50
Kalutara ...	—	—	—	—	80 75	118 75	155 0	354 50
Total ...	137 60	191 25	175 75	504 60	876 35	1,120 50	1,047 50	3,044 35
Central.								
Kandy ...	149 60	130 50	148 75	428 85	137 45	122 0	133 50	392 95
Matale ...	29 0	28 90	23 50	81 40	30 5	16 0	23 25	69 30
Nuwara Eliya ...	14 50	8 0	9 75	32 25	7 25	11 75	25 0	44 0
Gampola ...	22 0	30 25	32 25	84 50	25 75	19 0	18 75	63 50
Hatton ...	27 75	40 0	22 75	90 50	42 0	35 0	25 50	102 50
Total ...	242 85	237 65	237 0	717 50	242 50	203 75	226 0	672 25
Northern.								
Jaffna ...	225 10	261 50	232 75	719 35	335 15	294 20	244 10	873 45
Mannar ...	4 0	4 75	11 0	19 75	5 50	2 50	8 50	16 50
Mullaittivu ...	—	1 25	—	1 25	0 50	1 75	2 75	5 0
Total ...	229 10	267 50	243 75	740 35	341 15	298 45	255 35	894 95
Southern.								
Galle ...	327 25	319 70	363 50	1,010 45	253 50	261 50	283 0	798 0
Matara ...	180 65	175 50	250 50	606 65	215 50	206 0	137 0	558 50
Tangalla ...	61 5	42 25	48 50	151 80	50 50	36 75	27 75	115 0
Hambantota ...	2 0	9 25	8 0	19 25	12 75	4 50	5 0	22 25
Balapitiya ...	—	4 50	5 0	9 50	1 50	9 0	1 0	11 50
Total ...	570 95	551 20	675 50	1,797 65	533 75	517 75	453 75	1,505 25
Eastern.								
Batticaloa ...	33 65	39 0	43 25	115 90	22 75	106 0	51 0	179 75
Trincomalee ...	9 50	19 25	4 75	33 50	18 0	14 0	18 50	50 50
Total ...	43 15	58 25	48 0	149 40	40 75	120 0	69 50	230 25
North-Western.								
Kurunegala ...	66 0	73 25	73 50	212 75	87 50	102 0	75 75	265 25
Puttalam ...	24 95	37 45	41 75	104 15	49 25	74 60	41 50	165 35
Chilaw ...	57 75	42 0	65 0	164 75	43 25	56 0	27 75	127 0
Total ...	148 70	152 70	180 25	481 65	180 0	232 60	145 0	557 60
North-Central.								
Anuradhapura...	1 50	0 25	1 0	2 75	1 50	4 0	0 50	6 0
Uva.								
Badulla ...	19 25	34 75	31 0	85 0	23 75	32 25	31 25	87 25
Sabaragamuwa.								
Ratnapura ...	23 25	22 25	34 25	79 75	36 75	46 25	47 25	130 25
Kegalla ...	29 25	36 10	45 0	110 35	37 0	34 0	65 50	136 50
Avisawella ...	1 75	4 75	6 25	12 75	7 75	6 25	2 25	16 25
Total ...	54 25	63 10	85 50	202 85	81 50	86 50	115 0	283 0

RECAPITULATION.

	Quarter ended March 31, 1902. Rs. c.	Quarter ended June 30, 1902. Rs. c.
Western Province ...	504 60	3,044 35
Central Province ...	717 50	672 25
Northern Province ...	740 35	894 95
Southern Province ...	1,797 65	1,505 25
Eastern Province ...	149 40	230 25
North-Western Province ...	481 65	557 60
North-Central Province ...	2 75	6 0
Province of Uva ...	85 0	87 25
Province of Sabaragamuwa ...	202 85	283 0
Total ...	4,681 75	7,280 90

STATEMENT showing the Amount of Fees received by the Fiscals of the several Provinces, agreeably to the 16th clause of the Ordinance No. 4 of 1867 and Ordinance No. 3 of 1890, during the Quarters ended September 30 and December 31, 1901.

Province and District.	Quarter ended September 30, 1902.								Quarter ended December 31, 1902.							
	July.		August.		September.		Total.		October.		November.		December.		Total.	
	Rs.	c.	Rs.	c.	Rs.	c.	Rs.	c.	Rs.	c.	Rs.	c.	Rs.	c.	Rs.	c.
Western.																
Colombo ...	714	15	692	75	749	75	2,156	65	727	75	615	25	488	0	1,831	0
Negombo ...	271	50	225	75	285	10	782	35	308	75	255	50	108	25	672	50
Kalutara ...	100	0	101	75	132	75	334	50	130	25	98	75	112	50	341	50
Total ...	1,085	65	1,020	25	1,167	60	3,273	50	1,166	75	969	50	708	75	2,845	0
Central.																
Kandy ...	151	85	87	50	124	85	364	20	103	50	124	45	66	70	294	65
Matale ...	27	25	14	25	29	0	70	50	18	25	21	50	14	25	54	0
Nuwara Eliya ...	8	75	7	25	—		16	0	22	0	7	50	2	75	32	25
Gampola ...	23	25	17	0	16	50	56	75	37	25	17	35	8	25	62	85
Hatton ...	58	0	41	75	38	75	138	50	27	75	41	25	28	25	97	25
Total ...	269	10	167	75	209	10	645	95	208	75	212	5	120	20	541	0
Northern.																
Jaffna ...	366	65	336	75	328	20	1,031	60	436	30	385	35	418	85	1,240	50
Mannar ...	19	50	5	25	4	25	29	0	4	0	5	50	3	0	12	50
Mullaittivu ...	0	75	0	50	0	25	1	50	1	50	6	25	4	75	12	50
Total ...	386	90	342	50	332	70	1,062	10	441	80	397	10	426	60	1,265	50
Southern.																
Galle ...	185	10	231	0	380	25	796	35	390	75	259	50	181	25	831	50
Matara ...	212	50	130	0	181	10	523	60	177	50	207	25	117	35	502	10
Tangalla ...	31	75	36	50	34	50	102	75	43	25	49	75	52	50	145	50
Hambantota ...	6	0	2	75	8	0	16	75	6	0	14	25	6	75	27	0
Balapitiya ...	2	50	8	75	—		11	25	14	0	15	0	1	50	30	50
Total ...	437	85	409	0	603	85	1,450	70	631	50	545	75	359	35	1,536	60
Eastern.																
Batticaloa ...	47	75	32	75	63	75	144	25	38	50	44	90	46	25	129	65
Trincomalee ...	14	25	18	75	20	0	53	0	7	50	23	75	7	50	38	75
Total ...	62	0	51	50	83	75	197	25	46	0	68	65	53	75	168	40
North-Western.																
Kurunegala ...	73	25	123	50	75	25	272	0	51	55	83	50	50	0	185	5
Puttalam ...	55	90	36	15	88	25	180	30	19	50	88	25	35	25	143	0
Chilaw ...	49	25	73	75	59	40	182	40	48	0	51	25	33	25	132	50
Total ...	178	40	233	40	222	90	634	70	119	5	223	0	118	50	460	55
North-Central.																
Anuradhapura ...	10	0	6	0	6	50	22	50	4	50	5	50	4	75	14	75
Uva.																
Badulla ...	34	25	27	75	36	0	98	0	—		—		—		—	
Sabaragamuwa.																
Ratnapura ...	44	25	30	75	49	75	124	75	34	20	25	25	15	50	74	95
Kegalla ...	66	0	50	0	42	50	158	50	98	45	65	50	41	0	204	95
Avisawella ...	7	50	4	50	3	25	15	25	9	0	1	50	6	50	17	0
Total ...	117	75	85	25	95	50	298	50	141	65	92	25	63	0	296	90

RECAPITULATION.

	Quarter ended September 30, 1902. Rs.	c.	Quarter ended December 31, 1902. Rs.	c.
Western Province ...	3,273	50	2,845	0
Central Province ...	645	95	541	0
Northern Province ...	1,062	10	1,265	50
Southern Province ...	1,450	70	1,536	60
Eastern Province ...	197	25	168	40
North-Western Province ...	634	70	460	55
North-Central Province ...	22	50	14	75
Province of Uva ...	98	0	—	
Province of Sabaragamuwa ...	298	50	296	90
Total ...	7,683	20	7,128	70

XLII.—1903.

REPORT

OF THE

CENTRAL IRRIGATION BOARD FOR 1902,

TO WHICH ARE ADDED

THE PROVINCIAL REPORTS ON MINOR IRRIGATION WORKS.

(Prepared in pursuance of Section 4 of Ordinance No. 10 of 1901.)

Ordered by His Excellency the Governor to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price Re. 1·20.

1903.

REPORT OF

THE CENTRAL IRRIGATION BOARD

FOR 1902.

President:

H. E. THE GOVERNOR THE RIGHT HON. SIR J. WEST RIDGEWAY, G.C.M.G., K.C.B., K.C.S.I.

Members.

THE DIRECTOR OF PUBLIC WORKS (THE HON. Mr. F. A. COOPER, C.M.G.).
THE SURVEYOR-GENERAL (Mr. F. H. GRINLINTON).
MR. A. DE A. SENEVIRATNE.
MR. P. COOMARASWAMY.
THE HON. Mr. S. C. OBEYESEKERE, M.L.C.
THE DIRECTOR OF IRRIGATION (MR. H. T. S. WARD).

Secretary, MR. F. J. TOTHILL.

The Board did not meet during the year. All business was transacted by means of minutes on papers circulated to the members.

In Appendix A will be found a record of the business transacted by the Board during 1902.

In Appendix B extracts from the reports of the Government Agents regarding minor irrigation works are given.

In Appendix C is given a list of the irrigation staff at the end of the year.

One Engineer, Mr. L. P. Emerson, joined the Department, having been transferred from the Public Works Department.

Mr. Watts left the Department on the expiration of his agreement, and Mr. Hilton's services had to be dispensed with owing to his continued ill-health.

Mr. Byrde joined the Department as an Irrigation Surveyor. Mr. Roberts, Irrigation Surveyor, resigned, and one Assistant Irrigation Surveyor was appointed, and one, Mr. Chellaturai, died during the year.

Mr. Rodrigo was promoted from First Class Sub-Inspector to Inspector.

One First Class Sub-Inspector retired on a pension, three Second Class Inspectors were promoted to the First Class, four Second Class Sub-Inspectors were appointed and a fifth was appointed on probation, while four vacancies were created by retirement.

Mr. Parker, the Irrigation Assistant, went on home leave in June, and Mr. Ferguson, Chief Irrigation Inspector, was absent with the Coronation Contingent from April to September, and Messrs. Morris, Irrigation Engineer, and F. Booth, Chief Irrigation Inspector, were on leave out of the Island.

The total expenditure during the year was Rs. 779,714·64; the services for which it was appropriated, compared with the three previous years, were as follows:—

	1899. Rs. c.	1900. Rs. c.	1901. Rs. c.	1902. Rs. c.
Works in charge of the Director of Irrigation	125,249 52	199,417 62	390,194 42	381,247 18
Minor and village works ...	56,007 83	42,400 0	29,970 45	25,337 19
Total on works of construction and improvement	181,257 35	241,817 62	420,164 87	406,584 37
Repairs ...	12,034 62	12,324 16	10,231 26	23,190 22
Maintenance	69,881 58	74,556 16	68,502 7	76,806 10
Surveys	12,126 0	21,594 1	29,811 30	24,038 66
Establishment: Personal Emoluments (including salaries and allowances)...	90,153 81	132,093 35	207,164 68	219,805 83
Miscellaneous: Tools, instruments, &c.	8,188 93	21,639 51	31,971 5	29,289 46
Total ...	373,642 29	504,024 81	767,845 23	779,714 64

Distribution of Expenditure.

	1899. Rs. c.	1900. Rs. c.	1901. Rs. c.	1902. Rs. c.
Northern Province	124,500 67	124,453 71	154,482 25	113,733 61
Southern Province	35,117 21	44,338 20	45,929 40	69,281 67
Eastern Province	21,221 61	54,910 20	122,856 31	126,836 87
Western Province	3,604 80	2,705 83	397 22	1,115 38
Central Province	6,782 1	5,186 45	2,874 1	3,850 14
North-Central Province	58,975 91	59,988 37	176,882 72	179,429 22
North-Western Province	41,326 66	43,115 72	46,077 19	52,182 14
Province of Uva	9,446 47	7,954 58	9,067 25	11,228 20
Province of Sabaragamuwa	8,451 70	7,638 89	4,741 *2	5,340 89
Miscellaneous	8,188 93	21,639 51	35,637 31	29,289 46
Headquarters (salaries and allowances)	14,886 16	78,465 55	10,946 49	14,467 12
	332,502 13	450,397 1	609,891 17	606,754 70
Establishment : Personal Emoluments	41,140 16	53,627 80	157,954 6	172,959 94
Total	373,642 29	504,024 81	767,845 23	779,714 64

Statement of Expenditure and Balance of Estimates.

	1899. Rs. c.	1900. Rs. c.	1901. Rs. c.	1902. Rs. c.
(1) Personal Emoluments	41,140 16	61,508 39	190,993 26	196,729 0
(2) Balances of estimates brought forward from previous years	206,090 54	122,808 52	112,136 68	76,983 71
(3) Estimates sanctioned on apportionment	322,762 59	472,403 65	611,328 57	645,260 19
Total	569,993 29	656,720 56	914,458 51	918,972 90
Expended during the year	373,642 29	504,024 81	767,845 23	779,714 64
Balance	196,351 0	152,695 75	146,613 28	139,258 26
Percentage of Total	34·4	23·2	16·3	15·1

No special vote of Legislature was taken for any work during 1902.

The expenditure on works of construction and improvement in charge of the Director of Irrigation was as follows :—

	1899. Rs. c.	1900. Rs. c.	1901. Rs. c.	1902. Rs. c.
Giant's tank, Northern Province	72,892 19	102,365 23	114,423 2	59,133 99
Kanukkeni, Northern Province	20,039 37	6,505 53	22,268 17	16,570 83
Karachchi scheme, Northern Province	—	—	—	18,478 86
Kalawewa Yoda-ela, North-Central Province	—	1,223 95	68,179 37	46,756 83
Maha Illupallama, North-Central Province	9,553 99	10,225 95	15,772 2	18,083 24
Minneri, North-Central Province	14,912 25	19,595 91	46,106 85	69,247 59
Mananketiya, North-Central Province	—	—	—	964 7
Nachchaduwa, North-Central Province	—	—	—	60 0
Mahagalkadawala, North-Central Province	—	—	—	94 92
Kanthalai, Eastern Province	763 3	42 59	1,918 49	5,580 62
Vakaneri, Eastern Province	—	15,483 36	50,223 34	35,321 53
Rugam anicut, Eastern Province	—	3,554 54	13,647 80	22,739 42
Pattipolai-aru, Eastern Province	27 60	218 91	2,834 45	3,678 91
Sagamam Vammiyadi scheme, Eastern Province	—	3,994 3	13,900 8	11,950 97
Tempitiya, Eastern Province	—	—	4,910 32	5,147 21
Unnichchai	—	—	6,699 63	11,480 11
Walawe-ganga, Southern Province	6,577 59	18,988 6	15,297 37	3,784 86
Kirinde-oya, Southern Province	—	—	—	37,983 62
Deduru-oya works, North-Western Province	7,922 94	15,263 9	14,013 51	14,189 60
Total	132,688 96	197,461 15	390,194 42	381,247 18

* Rs. 6,577·59 inserted in report of 1901 is an error.

The restoration of Giant's tank was completed on the 30th November. The tank had water in it during the whole year, and some of the village tanks below it were supplied with water twice during the year. The total cost of the work has been Rs. 593,927, and some 13,000 acres of paddy fields were cultivated in 1902.

At Kanukkeni the building of the spill wall was completed, and the work will be finished in 1903.

The works at Karachchi were commenced in September, and labour was sent from Giant's tank, as it ceased to be required there. The work in hand was the construction of the subsidiary tank at the Driaru, and it made good progress.

On the Kalawewa Yoda-ela the improvements between the 11th and 25th miles were in hand, and a circuit bungalow and a Guardian's bungalow were built. Better progress was made during this year at Maha Illuppalama, and the south sluice was finished and the spill wall nearly completed.

The works at Minneri made good progress, and by the close of the year the earthwork at the spills and the first 4 miles of channel were completed, and the work at the old bisokotuwa at the high level sluice was nearly complete.

The works for the improvement of Manankettiya tank were commenced.

The extension of the main channel at Kanthalai was proceeded with, but was delayed owing to the difficulty of obtaining possession of the ground through which the channel passes.

The progress at Vakaneri was again delayed by want of labour; a further batch of 283 coolies was obtained from India, and more are expected, but the local labour gave no assistance. Good progress was made in sinking the puddle trench and with the earthwork on the embankment. The spill channel and service road were completed, and some progress was made with the irrigation channel.

The anicuts under Rugam continue to make progress, but work can only be carried on between the months of May and October. The foundations of the Kumukaddu anicut were completed, and those of the anicuts at Sankulam and Verakadu were proceeded with. The anicut at Kadavadipalam was not commenced owing to the scarcity of labour. The greater parts of the materials required for the next season's work were collected.

At the Pattipolai-aru works improvements for the protection of the anicuts were proceeded with.

The earthwork on the tank at Sagamam was practically completed, and nearly the whole of the work at Vammiyadi was finished. At the latter place a heavy flood at the close of the year breached the bund and washed away the sluice; the repairs will be executed during next year. The failure was due to the want of proper material for the construction of the embankment.

The work at Tempitiya made some progress, the earthwork—excepting the filling of the breach—and the spill being nearly completed. Labour was again difficult to obtain here.

At Unnichchai the approach road and bungalow were finished, and the site for the bund cleared and the lines of channel partly cleared and the spill commenced. The progress made, owing to the scarcity of labour, was less than had been anticipated.

The improvements at the Walawe-ganga were continued, safety spills being constructed, and the right abutment of the anicut raised.

The heightening of the bund of Tissawewa, with the alteration to the sluices, spills, and channels, were finished. A new channel from Debarawewa was commenced.

The raising of the bund of Yodawewa was nearly completed and the spills and sluices begun.

Work was continued in the tunnel on the main channel at Deduru-oya, permanent footbridges were erected across a number of the spills, the inspection bungalow completed, and a number of minor improvements executed.

During the year an engineer was specially appointed to attend to the various minor irrigation works which were in need of repairs. Work was executed by him at Boralesgamuwa tank, on the Alut-ela, and at Uggalkaltota, and in addition he reported on or prepared plans for the improvement of the works on the Rakwana-ganga, in Kolonna korale, at Batugedara, Rothschild estate, and elsewhere.

Plans and estimates for the under-mentioned large schemes were completed during the year and the estimates for the works sanctioned :—

Unnichchai tank, Eastern Province.
Kondavaddavan and Velattapatti, Eastern Province.
Nachchaduwa, North-Central Province.
Mahagalkadawala, North-Central Province.
Sangilikanadarawa, North-Central Province.
Tinipitiyawewa, North-Western Province.

The following surveys were completed during the year and the plans and estimates taken in hand :—

Vavunnikulam, Northern Province.
Channel connecting Mahagalkadawala, North-Central Province, and Pavatkulam, Northern Province.
Anicuts on the Manalputti-aar, Eastern Province.
Mi-oya surveys, North-Western Province.
Walawe-ganga (left bank scheme), Southern Province.

The following surveys were in progress at the close of the year :—

Akattimurippu scheme, Northern Province.
Mahakanadarawa, North-Central Province.
Channels connecting Mahakanadarawa, North-Central Province, and the Dambulla-oya, Central Province.
Kirinde-oya scheme (right bank), Southern Province.
Mackerakatti dam, Province of Uva.

The restoration and repairs of village tanks were carried out as formerly by the Government Agents and the irrigation officers under them. The system of concentrating the village tank staff in one portion of the Province in order to expedite the completion of the tanks therein, which was first tried in the North-Western Province in 1900, was adopted in the Hurulu palata of the North-Central Province during the year, and met with success. This system will be continued in the North-Central Province during 1903, and in order to permit of its being more effectually carried out, Mr. F. Booth, Chief Irrigation Inspector, was transferred at the close of the year from the Eastern Province to the North-Central Province, where there now are two Chief Irrigation Inspectors engaged.

The appointment of special officers to control the cultivation of the land under the Giant's tank, Pattipola-aru, Kalawewa Yoda-ela, Deduru-oya, and Walawe-ganga was sanctioned by Government during the year. The appointments have now been made; the officers appointed are to be known as Irrigation Superintendents, and it is hoped that under them cultivation and the distribution of the water necessary for it will be efficiently and economically carried out.

A list of the tanks so far restored and maintained by Government is given in Appendix D.

Tabulated statements of expenditure during the year are given in Appendices E and F.

A detailed statement of the cost of the maintenance of works in charge of the Director of Irrigation is given in Appendix G.

Appendix H is the General Irrigation Return corrected up to 31st December, 1902.

H. T. S. WARD,
Director of Irrigation.

August 2, 1903.

APPENDIX A.

MINUTES OF PROCEEDINGS

OF

THE CENTRAL IRRIGATION BOARD, 1902.

HIS EXCELLENCY THE GOVERNOR (THE RIGHT HON. SIR J. WEST RIDGEWAY, G.C.M.G., K.C.B, K.C.S.I.), *President.*

THE DIRECTOR OF PUBLIC WORKS (THE HON. MR. F. A. COOPER, C.M.G.).

THE SURVEYOR-GENERAL (MR. P. D. WARREN, *Acting*).

MR. A. DE A. SENEVIRATNE.

MR. P. COOMARASWAMY.

THE HON. MR. S. C. OBEYESEKERE, M.L.C.

THE DIRECTOR OF IRRIGATION (MR. H. T. S. WARD).

Ref. No. *Secretary*, MR. F. J. TOTHILL.

THE Papers dealt with by circulation among the Members between the **1st January** and **31st March, 1902,** are recorded as follows :—

GENERAL.

21 **Proposed Works for 1902** (Vote Rs. 900,000).—Submits statement of proposed works for 1902 and proposed apportionment of funds for 1902.

The following sums were apportioned for expenditure on new works during 1902 :—

	Rs.	c.
Northern Province	200,750	0
Southern Province	73,330	0
Eastern Province	255,713	0
Western Province	250	0
Central Province	10,683	0
North-Central Province	216,665	0
North-Western Province	69,448	0
Province of Uva	12,130	0
Province of Sabaragamuwa	1,931	0
Special Apportionment for Urgent Minor Works	2,268	0
Miscellaneous, Instruments, &c.	37,791	0
Total ...	880,959	0

19 **Maintenance, 1902** (Vote Rs. 80,000).—Statements submitted by Government Agents and the Director of Irrigation of amounts which will be required during 1902 for the maintenance of irrigation works.

Authorized to submit detailed estimates providing for the maintenance of the irrigation works shown in the following list for the amounts given, the excess (Rs. 2,638) being met from the Irrigation Fund :—

Name of Work.	District.	Estimate for 1902. Rs.	c.
NORTHERN PROVINCE.			
Kanakarayankulam	... Government Agent, N. P., Vavuniya ...	200	0
Iratperiyakulam	... do. do. ...	250	0
Vavuniya	... do. do. ...	200	0
Mamadu	... do. do. ...	300	0
Mandukkoddai	... do. do. ...	200	0
Maha Rambaikulam	... do. do. ...	250	0
Vengalachcheddikulam ...	... do. do. ...	200	0
Periya Olukkulam	... do. do. ...	300	0
Sluiced Village Tanks ...	... do. do. ...	500	0
Periyakulam	... Director of Irrigation, Mullaittivu ...	200	0
Kanukkeni Tank	... do. do. ...	600	0
Giant's Tank	... do. Mannar ...	3,300	0[1]
SOUTHERN PROVINCE.			
Waggalmodara and Timbirimodara Flood-outlet	... Director of Irrigation	413	0
Dedduwe Channel	... do.	969	0
Gangaboda Pattu System.			
Hali-ela and 3 miles of Channel ...	... Director of Irrigation, Matara ...	3,860	0
Urapola Anicut and Channel ...	... do do. ...		
Sapugoda and Head Sluices ...	... do. do. ...		
Elawa Anicut and Channels, 2½ miles	... do. do. ...		
Homeragoda Channel ...	... do. do. ...		
Pettera Anicut and Channel ...	... do. do. ...		
Dandeniya Tank and Channel ...	... do. do. ...	850	0
	Carried over ...	12,592	0

[1] The increase of Rs. 1,800 on Giant's Tank works is due to increased length of channel and tank bund to be kept in order, and to the pay and allowance of one first class and one second class Guardian.

Name of Work.	District.		Estimate for 1902. Rs. c.
		Brought forward ...	12,592 0
Denegama-Weangwewa ...	... Director of Irrigation,	Matara ...	781 0
Kekenadura Tank and Channel ...	... do.	do. ...	1,000 0
Urubokka Dam	do.	do. ...	850 0
Udukiriwila Tank and Channels ...	... do.	Hambantota ...	1,440 0
Kirama System.			
Elpitiya Anicut and Arachchi Amuna ...	do.	Galle ...	1,260 0
Kirindi-oya Scheme (Tissa)	do.	Hambantota ...	2,550 0
Walawe-ganga Works	do.	do. ...	4,620 0
EASTERN PROVINCE.			
Hakgalawewa	... Government Agent, E. P.,	Batticaloa ...	33 0
Maha-oya Tank	... do.	do. ...	114 0
Pullumalai Tank ...	... Director of Irrigation	do. ...	120 0
Rugama Tank	... do.	do. ...	1,000 0
Kadukkamunai Tank ...	... do.	do. ...	339 0
Manalpiddi-aru Anicut ...	... do.	do. ...	382 0
Pulukunavi Tank	... do.	do. ...	451 0
Divulana Tank	... do.	do. ...	793 0
Tumpankeni Tank	... do.	do. ...	326 0
Chadayantalavai Tank ...	... do.	Kalmunai ...	630 0
Viragoda Tank	... do.	do. ...	270 0
Naulla Tank	... do.	do. ...	400 0
Panama Tank	... do.	do. ...	400 0
Rotawewa Tank	... do.	do. ...	550 0
Lahugalla Tank	... do.	do. ...	410 0
Pattipolai-aru Scheme (Amparai, Irakkamam, and Anicuts)	... do.	do. ...	3,535 0
Sakamam Works	... do.	do. ...	1,345 0
Ilakkantai Tank	... do.	Trincomalee ...	170 0
Allai Tank	... do.	do. ...	950 0
Peruveli Tank	... do.	do. ...	200 0
Andankulam	... do.	do. ...	470 0
Periyakulam	... do.	do. ...	560 0
Kantalay	... do.	do. ...	1,050 0
WESTERN PROVINCE.			
Polgaha Tank	... Government Agent,	Colombo. ...	50 0
Kadurugaha Tank	... do.	do. ...	50 0
Dikmaga Ihala Tank	... do.	do. ...	50 0
Dikmaga Pahala Tank ...	... do.	do. ...	50 0
Attidiya Sluice	... do.	do. ...	45 0
Nikatu-ela Sluice	... do.	do. ...	136 0
Padukada Dam and Boralesgomuwa ...	... do.	do. ...	50 0[1]
CENTRAL PROVINCE.			
Ma-ela	... Government Agent, C. P.,	Kandy ...	400 0
Waduwan-ela	... do.	Nuwara Eliya ...	400 0[2]
Bodi-ela	... do.	do. ...	400 0
Lamasuriyagama-ela and Guardian's bungalow	... do.	do. ...	350 0[2]
Barrack Plain Reservoir ...	... do.	do. ...	25 0
Karawilahena Tank	... do.	Matale ...	50 0
Nadeniya Amuna	... do.	do. ...	20 0
Elahera Head Sluice	... do.	do. ...	25 0
Village Tank Sluice	... do.	do. ...	250 0
Village labour supervision ...	... do.	do. ...	375 0
Bowatenna Channel	... do.	do. ...	—[3]
Wiragahapellessa	... do.	do. ...	10 0
Dambulla Tank	... do.	do. ...	—[3]
Eraulla Tank	... do.	do. ...	35 0
Nicol-oya Upper Ela	... do.	do. ...	—[3]
Kurukulayage Amuna ...	... do.	do. ...	—[3]
Pelwehera Tank	... do.	do. ...	50 0[2]
NORTH-CENTRAL PROVINCE.			
Kalawewa Yodi-ela	... Director of Irrigation,	Anuradhapura ...	10,550 0[4]
Kalawewa Tank and Channels ...	... do.	do. ...	
Balaluwewa Tank and Channels ...	... do.	do. ...	
Maha Illuppalama	... do.	do. ...	
Tissawewa Irrigation Works ...	... do.	do. ...	2,530 0
Bassawakulam Irrigation Works ...	... do.	do. ...	1,750 0
Nuwarawewa Irrigation Works ...	... do.	do. ...	2,365 0
Channels under Nuwarawewa ...	... do.	do. ...	825 0
Nuwarawewa Yodi-ela ...	... do.	do. ...	325 0
Minneri	... do.	do. ...	600 0
Maha Madawachchiya ...	... do.	do. ...	180 0
Talawe-ela Anicut	... Government Agent, N.C.P.,	Anuradhapura ...	200 0
Village Tanks	... do.	do. ...	3,000 0[5]
Five Irrigation Bungalows ...	... do.	do. ...	250 0[6]
		Carried over ...	64,987 0

[1] Applied for by the Government Agent. This tank was repaired by Government, and an upkeep rate is paid by the proprietors of the irrigable lands.

[2] Applied for by the Government Agent. The Waduwan-ela requires additional expenditure in order to keep it clear. The former allowance for Pelwehera was a temporary one on account of repairs that were necessary.

[3] Not applied for by the Government Agent.

[4] The increase of Rs. 1,350 is necessary in order to provide for the maintenance of Illuppalama tank and to pay the salaries of one first class Guardian and three second class Guardians.

[5] The increase is necessary on account of the increased number of completed tanks.

[6] Required for the maintenance of existing bungalows.

Name of Work.	District.	Estimate for 1902. Rs. c.
North-Western Province.		
	Brought forward ...	64,987 0
Kurunegala Tank Sluice and Channel ...	Director of Irrigation, Kurunegala ...	1,750 0[1]
Wenoruwewa Tank ...	do. do. ...	
Bu-ela Anicut ...	do. do. ...	
Kospotu-oya Anicut	do. do. ...	80 0
Mediyawe Tank	do. do.	528 0
Galgomuwa Tank	do. do. ...	330 0
Deduru-oya Channels ...	do. do. ...	4,775 0
Paragoda Anicut	Government Agent, N.W.P., do. ...	35 0
Meddeketiya Tank	do. do. ...	300 0
Magallawewa	do. do. ...	1,100 0[2]
Maha Uswewa Tank	do. Puttalam ...	660 0
Tinapitiya Tank	do. Chilaw ...	470 0
Sluiced Village Tanks ...	do. do. ...	1,000 0
Six Irrigation Bungalows ...	do. ...	160 0[3]
Province of Uva.		
Horaborawewa and Kudawewa Tanks ...	Government Agent, Uva ...	520 0
Sudupanawila Anicut, pay of Guardian ...	do.	60 0
Hambegamuwa Tank, pay of Guardian ...	do.	120 0
Okkampitiya-Yodi-ela (Kumbukkan-oya Works) ...	do.	1,988 0
Gal-oya Anicut, pay of cooly	do.	120 0
Province of Sabaragamuwa.		
Kolonna Korale Irrigation Works	Government Agent, Sabaragamuwa ...	1,500 0[4]
Batugedara Irrigation Works	do. do. ...	260 0[4]
Opanake Aqueduct	do. do. ...	20 0
Kinchigune Anicut	do. do. ...	180 0
Mulgama Tank	do. do. ...	50 0
Malwatta Irrigation Works	do. do. ...	165 0
Uggalkaltota Irrigation Works	do. do. ...	500 0
Rajawaka Bungalow	do. do. ...	120 0
Tunkame Bungalow	do. do. ...	120 0
Kaltota Bungalow	do. do. ...	120 0
Panamure Bungalow...	do. do. ...	120 0
Rakwana-ganga Irrigation Works	do. do. ...	500 0
	Total ...	82,638 0

20 **Salaries and Allowances, 1902** (Vote Rs. 48,408).—The following schedule of salaries and allowances chargeable against this vote for 1902 is sanctioned, and estimates passed accordingly. The excess will be met by a supplementary vote :—

Office or Present Duty.	Nature of Allowance.	Salary. Rs. c.	Allowance. Rs. c.
Headquarters.			
Director of Irrigation	... Horse allowance ...	— ...	420 0
One Irrigation Surveyor	... Commuted allowance ...	— ...	240 0
Three Irrigation Surveyors	... do. ...	— ...	1,080 0
Three Irrigation Assistant Surveyors ...	... do. ...	— ...	720 0
Two Irrigation Assistant Surveyors ...	... do. ...	— ...	480 0
One Irrigation Assistant Surveyor ...	... do. ...	— ...	240 0
Do. do.	... do. ...	— ...	240 0
One Assistant Irrigation Engineer ...	... do. ...	— ...	360 0[5]
One Irrigation Engineer	... do. ...	— ...	600 0
One Sub-Inspector	... do. ...	— ...	360 0
Two Sub-Inspectors	... do. ...	— ...	480 0
One Sub-Inspector	... do. ...	— ...	—[6]
Northern Province.			
Under the Director of Irrigation.			
One Irrigation Engineer	... Commuted allowance ...	— ...	600 0
Do. do.	... do.	— ...	600 0
Do. do.	... do. ...	— ...	600 0
One Irrigation Engineer, Giant's tank ...	... do. ...	— ...	600 0
One Irrigation Engineer, Kanukkeni ...	... do. ...	— ...	360 0
One Head Overseer	... —	— ...	96 0
	Carried over ...	—	8,076 0

[1] The increase of Rs. 570 is necessary on account of the increase in rates of wages at Kurunegala owing to the Northern Railway Works, and in order to provide for the maintenance of the Kurunegala tank bund.

[2] The increase of Rs. 614 is necessary in order to provide for the maintenance of four miles of channels constructed by Government, but previously not kept in order excepting irregularly by the landowners; and it also provides for placing the work in charge of a second class Guardian.

[3] For an irrigation bungalow at Nikaweratiya. The other bungalows are not being maintained.

[4] Amount applied for by the Government Agent.

[5] Vacancies not yet filled.

[6] Not required.

Office or Present Duty.	Nature of Allowance.	Salary. Rs. c.	Allowance. Rs. c.
	Brought forward ...	—	8,076 0
	Under the Government Agent.		
One Chief Inspector ...	... Commuted allowance ...	—	1,200 0
One Sub-Inspector ...	... do. ...	—	360 0
Do. ...	... do. ...	—	240 0[1]
Do. ...	... do. ...	—	240 0
Do. ...	... do. ...	—	240 0[2]
Do. ...	... do. ...	—	360 0[3]
	SOUTHERN PROVINCE.		
	Under the Director of Irrigation.		
One Irrigation Engineer, Walawe and Tissa ...	... Commuted allowance ...	—	600 0
Do. do. ...	... Horse allowance ...	—	420 0
One Irrigation Engineer ...	... Commuted allowance ...	—	600 0[4]
One Assistant Engineer, Hambantota ...	... do. ...	—	360 0
One Irrigation Inspector ...	... do. ...	—	480 0[5]
One Irrigation Inspector, Walawe ...	... do. ...	—	480 0[6]
One Sub-Inspector, Tissa ...	... do. ...	—	240 0
One messenger to Inspector ...	... do. ...	—	—[7]
	Under the Government Agent.		
One Chief Inspector, Hambantota ...	... Commuted allowance ...	—	1,200 0
One Sub-Inspector ...	... do. ...	720 0	240 0[8]
One messenger ...	... do. ...	120 0	—[9]
	EASTERN PROVINCE.		
	Under the Director of Irrigation.		
One Irrigation Engineer, Sakamam ...	... Commuted allowance ...	—	600 0
Do. do. ...	... Horse allowance ...	—	420 0
Do. Vakaneri ...	... Commuted allowance ...	—	600 0
Do. Unnichchai ...	... do. ...	—	600 0
Do. Rugam ...	... do. ...	—	600 0
Do. Kondavaddavan ...	... do. ...	—	600 0
Do. do. ...	... do. ...	—	600 0[10]
One Irrigation Inspector ...	... do. ...	—	480 0[11]
One Sub-Inspector ...	... do. ...	—	240 0
Do. ...	... do. ...	—	240 0
Do. ...	... do. ...	—	240 0
One Irrigation Surveyor ...	... do. ...	—	240 0
Do. ...	... do. ...	—	360 0[12]
One messenger to Inspector ...	... — ...	—	—[13]
	Under the Government Agent.		
One Chief Inspector ...	... Commuted allowance ...	—	1,200 0
One Inspector, Trincomalee ...	... do. ...	—	480 0
One Sub-Inspector ...	... do. ...	—	360 0
Do. ...	... do. ...	—	240 0
Do. ...	... do. ...	—	240 0
Do. ...	... do. ...	—	240 0
Three messengers ...	... — ...	—	—[13]
One messenger ...	... ...	120 0	—[14]
	WESTERN PROVINCE.		
	Nil.		
	CENTRAL PROVINCE.		
	Under the Director of Irrigation.		
	Nil.		
	Under the Government Agent.		
One Sub-Inspector ...	... Commuted allowance ...	—	360 0
One Inspector ...	... do. ...	—	720 0[15]
Payments to Headmen, Uda Hewaheta, Walapane, and Kotmale	— ...	—	—[16]
Batta to Presidents ...	... — ...	—	—[16]
Two messengers ...	... — ...	—	—[13]
One Sub-Inspector ...	... — ...	720 0	240 0[17]
One messenger ...	... — ...	120 0	—[18]
	Carried over ...	1,800 0	25,236 0

[1] First class Sub-Inspectorship now made Second class.
[2] Authorized by Colonial Secretary's letter No. 146 of June 17, 1901.
[3] Authorized by Colonial Secretary's letter No. 265 of October 21, 1901.
[4] Authorized by Colonial Secretary's letter No. 81 of March 28, 1901.
[5] Salary of Inspector provided under "Personal Emoluments," 1902. The allowance of 1901 was only for ten months.
[6] On promotion of Inspectorship allowance increased to the rate paid to other Inspectors.
[7] Salary of messenger provided under "Personal Emoluments," 1902.
[8] New appointment sanctioned by meeting of November 2, 1901.
[9] Usual messenger for new Sub-Inspector.
[10] Transferred from Northern Province.
[11] Salary of Inspector provided under "Personal Emoluments," 1902. The allowance of 1901 was only for ten months
[12] Authorized by Colonial Secretary's letter No. 146 of June 17, 1901.
[13] Salary of messengers provided under "Personal Emoluments," 1902.
[14] Usual messenger for Sub-Inspector, Panama pattu, not otherwise provided for.
[15] Transferred from North-Western Province.
[16] Not applied for by the Government Agent.
[17] New appointment sanctioned by meeting of November 2, 1901.
[18] Usual messenger for new Sub-Inspector.

Office or Present Duty.	Nature of Allowance.	Salary. Rs. c.	Allowance. Rs. c.
	Brought forward ...	1,800 0	25,236 0
North-Central Province.			
Under the Director of Irrigation.			
One Irrigation Engineer, Kalawewa-Yoda-ela ...	Commuted allowance ...	—	600 0
One Irrigation Engineer, Minneri ...	do. ...	—	600 0
Do. do. Nachchiyaduwa ...	do. ...	—	600 0
Do. do. Mahagalkadawela ...	do. ...	—	600 0
Do. do. do. ...	do. ...	—	600 0
One Sub-Inspector ...	do. ...	—	240 0
Do. ...	do. ...	—	360 0[1]
One Assistant Surveyor ...	do. ...	—	240 0
Do. ...	do. ...	—	240 0
One Inspector ...	do. ...	—	480 0[2]
Under the Government Agent.			
One Chief Inspector ...	Commuted allowance ...	—	960 0
One Inspector ...	do. ...	—	480 0[3]
One Sub-Inspector ...	do. ...	—	360 0
Do. ...	— ...	—	360 0
Do. ...	— ...	—	360 0
Do. ...	— ...	—	240 0
Twenty Wewa Lekamas ...	— ...	—	1,000 0
One Wewa Lekama ...	— ...	—	50 0[4]
Four messengers ...	— ...	—	—[5]
North-Western Province.			
Under the Director of Irrigation.			
One Irrigation Engineer, Palukadawala ...	Commuted allowance ...	—	600 0
Do. do. ...	do. ...	—	600 0
One Irrigation Surveyor, do. ...	do. ...	—	600 0
One Assistant Surveyor, do. ...	do. ...	—	240 0
Under the Government Agent.			
One Chief Inspector ...	Commuted allowance ...	—	1,200 0
One Sub-Inspector ...	do. ...	—	240 0[6]
Do. ...	do. ...	—	360 0
Do. ...	do. ...	—	360 0
Do. ...	do. ...	—	240 0[7]
Do. ...	do. ...	—	240 0
Do. ...	do. ...	—	240 0
Do. ...	do. ...	—	240 0
Ten Katti Kanganies ...	— ...	—	960 0[8]
House rent, Chilaw District ...	— ...	—	72 0
Seven messengers ...	— ...	—	—[9]
One Irrigation Clerk, Kurunegala Kachcheri ...	Salary ...	240 0	—[9]
Province of Uva.			
Under the Director of Irrigation.			
Nil.			
Under the Government Agent.			
One Sub-Inspector ...	— ...	—	500 0
Do. ...	— ...	—	240 0
Watcher for cement pipe factory at Bibile ...	— ...	30 0	—
Two earthwork overseers ...	— ...	720 0	—
Irrigation Clerk ...	— ...	—	—[10]
Two messengers ...	— ...	—	—[10]
Province of Sabaragamuwa.			
Under the Director of Irrigation.			
Nil.			
Under the Government Agent.			
One Sub-Inspector ...	— ...	—	360 0
One Irrigation Clerk ...	— ...	—	—[11]
One messenger ...	— ...	—	—[12]
Miscellaneous.			
Travelling allowance of Irrigation Officers ...	— ...	—	10,000 0
	Total ...	2,790 0	50,898 0[13]

[1] Second class Sub-Inspectorship now become First class.
[2] The allowance is raised to the rate paid to other Inspectors.
[3] Salary Rs. 500 provided under "Personal Emoluments," 1902.
[4] Authorized by Colonial Secretary's letter No. 216 of August 23, 1901.
[5] Salary of messengers provided under "Personal Emoluments," 1902.
[6] Transferred from Central Province.
[7] First class Sub-Inspectorship now become Second class.
[8] Eight Katti Kanganies at Rs. 960 asked for by Government Agent during 1902.
[9] Salary for six months at Rs. 40 authorized by Colonial Secretary's letter No. 314 of December 14, 1901, to Director of Irrigation, and 711 of December 30, 1901, to Government Agent, North-Western Province.
[10] Salary provided under "Personal Emoluments," 1902.
[11] Salary of clerk provided under "Personal Emoluments," 1902.
[12] Salary of messenger provided under "Personal Emoluments," 1902.
The excess will be met by a supplementary vote.

303/01 **Appointments.**—Memorandum from the Director of Irrigation, dated 19th December, 1901, stating that Messrs. Van Houten and Murugasoo, Assistant Draughtsmen on Rs. 30 per mensem, have passed the Surveyor-General's Examination and have been employed on the Magampattu scheme and conducted themselves satisfactorily. Recommends them for promotion to fill up two of the five vacancies for Assistant Irrigation Surveyors at Rs. 60 per mensem from the 1st January, 1902.

Approved, and appointments sanctioned by Government.

305/01 **Promotions and Appointments.**—Memorandum dated 21st December, 1901, from the Director of Irrigation, stating that the vacancy caused by the retirement of Mr. A. Presudi, Irrigation Inspector on Rs. 1,200 per annum, not having been filled up, recommends Mr. A. C. Rodrigo, the Senior First Class Sub-Inspector on Rs. 1,000 per annum, be promoted to fill it.

States that in addition to the vacancy that will be caused by Mr. Rodrigo's promotion, there is another vacancy to be filled up caused by the dismissal of Mr. Jayasundera.

There are also two other vacancies in the same class.

Recommends (1) the promotion of Messrs. P. Siriwardene and R. Gunaratnam, the two Senior Second Class Sub-Inspectors on Rs. 720, to be First Class Sub-Inspectors on Rs. 1,000 per annum; (2) the appointment of Messrs. D. G. Attygalle (past student, Technical College) and D. Speldewinde as Second Class Sub-Inspectors (on probation for one year) on Rs. 720 per annum.

States that there are three vacancies for Irrigation Surveyors on Rs. 1,200 per annum, and to fill one of these recommends Mr. A. E. Byrde (son of the late Mr. C. Byrde of Ambalangoda), who is twenty-seven years old and has served five years in the Survey Department. Mr. Byrde's services may, he thinks, be advantageously employed as Assistant to one or other of the Irrigation Engineers as soon as the works of construction commence (for which the plans and estimates are now being prepared), as he speaks both Tamil and Sinhalese, and is robust and active and accustomed to the low-country climate.

All the above promotions and appointments should take place from 1st January, 1902.

Approved by the Board, and the promotions and appointments sanctioned by Government from 1st January, 1902.

317/01 **Leave to Mr. A. M. Roberts.**—Memorandum dated 30th December, 1901, from the Director of Irrigation, stating that Mr. A. M. Roberts, Irrigation Surveyor, the Assistant to Mr. O'Brien at Vakaneri, has been frequently attacked by malarial fever, and in his present state of health he is able to render Mr. O'Brien no assistance.

Mr. Roberts has sent in an application for one month's leave supported by a medical certificate, and the Director of Irrigation has granted the leave in anticipation of sanction. States that owing to his short service Mr. Roberts is not entitled to either privilege leave or half-pay leave. Inquires if the Board is prepared to recommend any exemption in this and similar cases.

It is decided that if Mr. Roberts has performed his duties satisfactorily, and his illness is due to no fault of his own, leave on full pay for a period not exceeding six weeks may be recommended.

6/02 **Resignation of Appointment.**—Letter from Mr. A. M. Roberts, Irrigation Surveyor, dated 16th January, 1902, requesting the Director of Irrigation to accept his resignation of his appointment as Irrigation Surveyor at Vakaneri, as his health does not allow of his continuance in the Service.

The Director of Irrigation states that he has accepted Mr. Roberts' resignation, being of the same opinion as himself as regards his health.

Approved by the Board.

Acceptance of resignation reported to Colonial Secretary and approved by Government from 16th January, 1902.

5/02 **Mr. S. Dabre.**—Memorandum dated 16th January, 1902, from the Director of Irrigation, stating that there are two vacancies in the First Class Irrigation Sub-Inspectors on Rs. 1,000 per annum, and requesting authority to promote the Senior Sub-Inspector, Mr. Dabre, now drawing Rs. 720 per annum, to one of these posts.

Approved, and recommended to the Colonial Secretary.

Appointment of Mr. Dabre as First Class Sub-Inspector on Rs. 1,000 per annum from 1st February, 1902, sanctioned by Government.

12/02 **Mr. McShane.**—Memorandum dated 25th January, 1902, from the Director of Irrigation, in reference to papers No. 6/02, reporting Mr. Roberts' resignation of his appointment as Irrigation Surveyor on Rs. 1,200 per annum, encloses an application from Mr. A. P. McShane. States that he has been highly recommended by the Hon. Mr. J. N. Campbell as a steady and honest man and a good worker, who understands the management of labour. He possesses the Surveyor-General's license, and is fifty-four years of age.

Recommends Mr. McShane for one of the three vacancies in the Irrigation Surveyor's class.

Approved by the Board, and recommended to the Colonial Secretary.

Appointment of Mr. McShane as an Irrigation Surveyor on Rs. 1,200 per annum sanctioned by Government.

13/02 **Mr. J. G. Vandersmagt.**—Memorandum dated 25th January, 1902, from the Director of Irrigation, stating that Mr. Vandersmagt having been Town Surveyor under the Colombo Municipality has resigned his appointment as Assistant Surveyor in the Irrigation Department.

Resignation accepted by the Board, and reported to the Colonial Secretary.

Acceptance of Mr. Vandersmagt's resignation from 1st February, 1902, approved by Government.

7 **Rugam Anicuts** (Mr. C. D. Watts).—Memorandum dated the 20th January, 1902, from the Director of Irrigation, stating that the work on Rugam anicuts is not progressing satisfactorily, and a change is absolutely necessary. He desires to send Mr. J. H. C. Chute from Madawachchiya to Rugama, and Mr. Watts to carry on Mr. Chute's work of surveying and levelling at Madawachchiya. He is able to survey and level, and proposes placing him under Mr. Park or Mr. Bradley, whose work is adjacent.

States that he is so dissatisfied with Mr. Watts' conduct of the works in his charge that he recommends he be given six months' notice as soon as possible, and provided with a free passage home as provided for in clause 8 of his agreement.

Ref. No.

Letter dated 19th March, 1902, from the Colonial Secretary, informs the Director of Irrigation that His Excellency the Governor has decided to determine Mr. Watts' engagement under clause 8 of his agreement, and the Director of Irrigation is accordingly requested to give him six months' notice of the determination of his engagement and to take steps to provide him with a return passage to England.

Mr. Watts informed accordingly.

23 **Illness of Mr. Hilton.**—Memorandum dated 4th February, 1902, from the Director of Irrigation, submitting a letter from the Assistant Colonial Surgeon, Kurunegala, regarding the illness of Mr. Hilton. States that Mr. Hilton being again incapacitated by fever proposes finding him work in another district, and has instructed Mr. L. P. Emerson to take over charge of Mr. Hilton's work and, if possible, complete the surveys and levels without delay.

Approved.

30 **Minor Irrigation Surveys, 1902.**—Memorandum dated 18th February, 1902, from the Director of Irrigation, submitting an estimate of Rs. 4,000 for minor irrigation surveys during 1902.

It is now proposed to include the cost of such surveys throughout the Island in one estimate, so as to avoid encumbering the accounts with a large number of insignificant estimates, which must continue to appear in them until the end of the year.

The estimate is sanctioned, and will be charged to the vote of Rs. 900,000 for the construction of irrigation works in 1902, as the vote for surveys for 1902 is fully appropriated.

31 **Draft Annual Report** of the Central Irrigation Board for 1900.

Approved and sent to Printer.

17 **Karachchi Scheme.**—Memorandum dated 31st January, 1902, from the Director of Irrigation, submitting an estimate of Rs. 1,105,714 for the Karachchi scheme, which provides for the making of a reservoir on the Kanakarayan-aru, the restoration of an ancient tank on the Dri-aru, the cutting of channels on the eastern and western sides of the Kanakarayan valley with the necessary sluices, spills, bridges, and distributing channels, and other incidental works. The Director of Public Works stated that in the absence of definite information he was of opinion that the quantity of water to be dealt with in time of floods will be more than is estimated by the Director of Irrigation.

If the topographical surveys are sufficiently advanced, he thinks it would be well to ascertain maximum flood discharge per square mile from the catchment areas of existing tanks. Special provision appears necessary for dealing with flood waters during construction.

Scheme approved. Ordered that a meeting of proprietors be held and the views of the Government Agent ascertained. (The papers will have to be laid before the Legislative Council eventually.)

SOUTHERN PROVINCE.

36 **Rent of Quarters and Office** occupied by the Irrigation Inspector at Hakmana.—Memorandum dated 13th March, 1902, from the Director of Irrigation, requesting authority of the Central Irrigation Board to pay Rs. 10 per mensem as rent of the quarters and office occupied by the Irrigation Inspector at Hakmana.

States that the amount of the rent is reasonable, and can be charged to the contingencies of the several estimates in charge of the Inspector without making special provision.

Approved.

ESTIMATES.

The following estimates submitted by the Government Agents and the Director of Irrigation have received the sanction of the Central Irrigation Board :—

		Amount. Rs. c.	Remarks.
	Northern Province.		
9	**Manducottai and Mamadu tanks**, for payment of excess in maintenance	3 43 ...	Maintenance vote, 1902
	Maintenance :—		
	Crown tanks near Vavuniya	1,200 0 ...	Maintenance vote, 1902
	Vengalachcheddikulam and Periya Olukkulam ...	500 0 ...	do.
	Giant's tank	3,300 0 ...	do.
	The finished portion of the Kanukkeni tank ...	600 0 ...	do.
	Periyakulam	200 0 ...	do.
	Southern Province.		
301/01	**Tissa irrigation scheme**, for improvements at the Kirindi-oya (Tissa) irrigation works ...	91,559 0 ...	Apportionment, 1902
16/02	**Wehella tank**, Matara, for repairs ...	55 0 ...	do.
	Maintenance :—		
	Kirindi-oya (Tissa) irrigation works ...	2,550 0 ...	Maintenance, 1902
	Walawe-ganga irrigation works	4,620 0 ...	do.
	Kirama system of irrigation works ...	1,260 0 ...	do.
	Waggalmodara flood outlets	413 0 ...	do.
	Dedduwa irrigation works	969 0 ...	do.
	Gangaboda pattu irrigation works ...	3,860 0 ...	do.
	Dandeniya irrigation works	850 0 ...	do.
	Denegama and Uyanwewa irrigation works ...	781 0 ...	do.
	Kekanadura irrigation works	1,000 0 ...	do.
	Urubokka irrigation works	850 0 ...	do.
	Udukiriwila irrigation works	1,440 0 ...	do.
	Eastern Province.		
616/00	**Pattipolai-aar works**, for protecting abutments of anicuts and sluices at the Pattipolai-aru scheme	6,049 0 ...	Apportionment, 1902

Ref. No.		Amount. Rs.	c.		Remarks.
24 02	**Irrigation Guardian's bungalows:—** Building a Guardian's bungalow at Andankulam ...	1,875	0	...	Apportionment, 1902
	Do. do. Allai tank ...	1,975	0	...	do.
22	**Kalingulas for village tanks,** for insertion of three kalingulas for village tanks in Eruvil pattu and Akkarai pattu	1,842	0	...	do.
23	**Puluganawa and Kadukkamunai tanks,** for surveys and levels	312	50	...	do.
	Maintenance:—				
	Kadukkamunai and Pulukunavi tanks and Manal-puddi-aar anicut	1,172	0	...	Maintenance vote, 1902
	Divulana and Tumpankeni tanks	1,119	0	...	do.
	Chadayantalawa and Viragoda tanks ...	900	0	...	do.
	Pullumalai tank	120	0	...	do.
	Rugama tank	1,000	0	...	do.
	Panama pattu works (Naulla, Panama, Rotawewa, and Lahugalla tanks).	1,760	0	...	do.
	Pattipolai-aru scheme	3,535	0	...	do.
	Sakamam works	1,345	0	...	do.
	Ilukkantai, Allai, and Peruveli tanks ...	1,320	0	...	do.
	Andankulam and Periyakulam	1,030	0	...	do.
	Kantalay tank	1,050	0	...	do.
	Central Province.				
	Maintenance:—				
	Maha-ela	400	0	...	Maintenance vote, 1902
	Waduwawala-ela	400	0	...	do.
	Bodi-ela	400	0	...	do.
	Lamasuriyagama and Guardian's bungalow ...	350	0	...	do.
	Barrack Plain reservoir ...	25	0	...	do.
	North-Central Province.				
306 01	**Maha Galkadawala and Mahakanadarawa,** for additional surveys	5,000	0	...	Surveys
139 01	**Maha Diulwewa sluice,** for repairs ...	430	0	...	Apportionment, 1902
307 01	**Restoration of village tanks,** building four camps at Galapitagala, Kainatama, Konewewa, and Kirimetiyagama, and for making ten bund gauges in wood	154	63	...	do.
27 02	**Bassawakkulam sluice,** for stopping leaks ...	1,093	0	...	do.
34 02	**Manankettiya tank,** for repairing the sluice ...	130	0	...	do.
02	**Maintenance:—**				
	Kalawewa scheme and Maha Illuppallama ...	10,550	0	...	Maintenance vote, 1902
	Tissawewa, Bassawakkulam, and Nuwarawewa with channels	7,795	0	...	do.
	Minneri tank	600	0	...	do.
	Maha Madawachchiya	180	0	...	do.
	Talawe-ela anicut	200	0	...	do.
	Village tanks	3,000	0	...	do.
	North-Western Province.				
298 01	**Pandawewa,** for a survey of the irrigable land under Pandawewa in Dewamedi Hatpattu, Kurunegala District	2,575	0	...	Surveys
4 02	**Irrigation Guardian's bungalow,** for building a Guardian's bungalow, store, and cooly lines at Kurunegala	4,059	0	...	Apportionment, 1902
	Maintenance:—				
	Deduru-oya works	4,775	0	...	Maintenance vote, 1902
	Kurunegala and Wenoruwewa tanks and Bu-ela anicut and channels connected therewith ...	1,750	0	...	do.
	Kospotu-oya anicut	80	0	...	do.
	Mediyawa and Galgomuwa tanks	858	0	...	do.
	Paragoda anicut	35	0	...	do.
	Meddeketiya tank	300	0	...	do.
	Magallewewa	1,100	0	...	do.
	Maha Uswewa	660	0	...	do.
	Tinipitiwewa	470	0	...	do.
	Sluiced village tanks	1,000	0	...	do.
	Irrigation bungalow at Nikaweratiya ...	160	0	...	do.
	Province of Uva.				
1 02	**Dehigolla Maha-ela,** for replacing the washed away planking	54	20	...	Apportionment, 1902
	Maintenance:—				
	Horaborawewa and Kudawewa	520	0	...	Maintenance vote, 1902
	Sudupanawila and Hambegamuwa tanks ...	180	0	...	do.
	Okkampitiya Yoda-ela anicut	1,988	0	...	do.
	Gal-oya anicut	120	0	...	do.
26 02	**Wahugoruwewewa in Wellassa,** for the survey	100	0	...	Charged to estimate for minor irri surveys ...

Ref. No.		Amount. Rs. c.		Remarks.
	Province of Sabaragamuwa..			
3 02	**Panamure north channel**, for certain repairs	145 0	...	Apportionment, 1902
11 02	**Kaltota irrigation channel**, for repairing damages	1,286 0	...	do.
29 02	**Tunkame bungalow**, for repairs ...	150 0	...	do.
	Maintenance :—			
	Kolonna korale irrigation works	1,500 0	...	Maintenance
	Batugedara irrigation works	260 0	...	do.
	Openake aqueduct	20 0	...	do.
	Irrigation works at Kinchigune	180 0	...	do.
	Mulgama tank	50 0	...	do.
	Malwatta irrigation works	165 0	...	do.
	Uggalkaltota irrigation works	500 0	...	do.
	Irrigation bungalows : Rajawaka, Tunkame, Kaltota, and Panamure	480 0	...	do.
	Rakwana-ganga irrigation works	500 0	...	do.
	Miscellaneous.			
10	**Surveying and drawing instruments and materials**, for purchase of ...	3,131 25	...	Apportionment, 1902
28	**Drawing materials**, for purchasing drawing materials	59 50	...	do.
33	**Rent**, for rent of chamber No. 4, Victoria Arcade, occupied as office of the Director of Irrigation ...	1,800 0	...	do.
	Tools and plant for the use of the Irrigation Department, for purchase of ...	20,000 0	...	do.
	Stationery, for purchase of	1,500 0	...	do.
	For miscellaneous expenses, 1902 ..	250 0	...	do.
	Furniture, for purchase of	1,000 0	...	do.
30	**Minor irrigation surveys**	4,000 0	...	do.
20	**Salaries and allowances :—**			
	For salaries of Irrigation Officers during 1902 ...	2,790 0	...	Salaries and allowances, 1902
	For allowances to Irrigation Officers during 1902	40,898 0	...	do.
	For travelling allowances and expenses during 1902	10,000 0	...	do.
	For urgent minor irrigation works ...	2,268 0	...	Apportionment, 1902

MODE OF REPAYMENT, OR CONDITIONS.

a.—Repayment to be made in annual instalments.
b.—Rate in perpetuity for interest and upkeep in lieu of repayment.
c.—Gratuitous. No payment to be made in respect of this expenditure.

WEST RIDGEWAY,
President.

HIS EXCELLENCY THE GOVERNOR (THE RIGHT HON. SIR J. WEST RIDGEWAY, G.C.M.G., K.C.B., K.C.S.I.), and

HIS EXCELLENCY THE LIEUTENANT-GOVERNOR (THE HON. EVERARD FERDINAND IM THURN, C.B., C.M.G.), *Presidents.*

THE DIRECTOR OF PUBLIC WORKS (THE HON. MR. F. A. COOPER, C.M.G.).

THE SURVEYOR-GENERAL (MR. P. D. WARREN, *Acting*).

MR. A. DE A. SENEVIRATNE.

MR. P. COOMARASWAMY.

THE HON. MR. S. C. OBEYESEKERE, M.L.C.

THE DIRECTOR OF IRRIGATION (MR. H. T. S. WARD).

Secretary, MR. F. J. TOTHILL.

THE Papers dealt with by circulation among the Members between the **1st April** and **30th June, 1902**, are recorded as follows :—

GENERAL.

42 **Movement of Irrigation Engineers.**—Memorandum from the Director of Irrigation, dated 18th March, reporting certain moves of Irrigation Engineers and other members of the staff, and requests the covering authority of the Central Irrigation Board, viz. :—

Messrs. Brown and Fraser, Irrigation Engineers, from Karachchi surveys, Northern Province, to Colombo, to prepare plans and estimates of the proposed works.

Mr. G. Bradley, Irrigation Engineer, from Pavatkulam surveys to Colombo, to prepare plans and estimates for the proposed restoration of Pavatkulam.

Mr. E. de Kretser, Irrigation Engineer, from Kondavaddavan to Colombo, to prepare plans and estimates of the proposed works in the Pattipolai-aru valley.

Mr. Llewellin, Irrigation Engineer, from Mamadola to Colombo, to prepare plans of the proposed Magam pattu channel, and return to his station.

Mr. Park, Irrigation Engineer, from Madawachchiya to Colombo, to prepare plans and estimates for the proposed restoration of Mahagalkadawala tank and Sangilikanadarawa tank.

Ref. No.

Mr. L. C. J. Doxat, Irrigation Engineer, from Galkulam to Colombo, to prepare plans and estimates for the proposed restoration of Nachchyaduwa tank.

Mr. F. E. Hilton, Irrigation Engineer, from Palukadawela to Mihintale, to take up the survey of Mahakanadarawa tank, which is connected with Mahagalkadawala tank.

Mr. Watts, Irrigation Engineer, from Rugam anicuts to Pavatkulam, to survey proposed channel from Mahagalkadawala to Pavatkulam.

Mr. Chute, Irrigation Engineer, from Madawachchiya to Rugam anicuts, to undertake charge of the works of their construction.

Mr. Byrde, Irrigation Surveyor, from Colombo to Minneri, to assist Mr. Gordon, Irrigation Engineer in charge of the works there.

Mr. Bradley, from Colombo to Anuradhapura, to take temporary charge of the Kalawewa and Yoda-ela during the absence of Mr. Balfour on sick leave.

Mr. Morgan, Sub-Inspector, from Minneri to the Kalawewa Yoda-ela, to take charge of the maintenance as First Class Guardian.

Mr. V. Thalayasingham, Sub-Inspector, from Matale to Chilaw, in place of Mr. G. Hawkins.

Mr. G. Hawkins, Inspector, from Chilaw to Matale, in place of Mr. Thalayasingham.

Approved.

35 **Minutes of Proceedings** of the Central Irrigation Board from 1st October to 31st December, 1901. Approved and sent to be printed.

63 **Unexpended Balances brought forward.**—The Director of Irrigation submits list of balances of Estimates brought forward for expenditure in 1902, amounting to Rs. 76,983·71.

Sanctioned.

66 **Draughtsmen employed in the Head Office.**—The Director of Irrigation submits a list of the amounts of salaries drawn by the draughtsmen employed temporarily at the office of the Director of Irrigation during the quarter ended 31st December, 1901, on Estimates No. 162 of 1900 and No. 202 of 1901.

67 **Draughtsmen employed in the Head Office.**—The Director of Irrigation submits a list of the amounts of salaries drawn by the draughtsmen employed temporarily at the office of the Director of Irrigation during the quarter ended 31st March, 1902, on Estimate No. 202 of 1901.

68 **Mr. O'Brien proceeding to Cuddappah to bring Coolies.**—Memorandum dated 15th May, from the Director of Irrigation, stating that consequent on Mr. O'Brien's proceeding from Vakaneri tank to Cuddappah to bring more coolies, Mr. R. F. Morris, Irrigation Engineer, Unnichchai, has been temporarily transferred to Vakaneri to take charge of the works there until Mr. O'Brien's return.

Mr. Chute, Irrigation Engineer, Rugam anicuts, is temporarily looking after what little work is going on at Unnichchai tank, as well as his own.

Requests approval of the Board to the transfer of Mr. Morris.

Approved.

79 **Minutes of Proceedings** of the Central Irrigation Board from 1st January to 31st March, 1902.—Ordered that in section 17, after 1st paragraph, the Director of Public Works' Minute on the Karachchi Scheme be inserted, and with this addition the proceedings may be printed.

Northern Province.

70 **Cart and Bulls, Giant's Tank.**—Memorandum dated 20th May, 1902, from the Director of Irrigation, applying for authority to sell a Government cart and a pair of Coast bullocks at the Giant's tank works, which have been employed for several years, and are now reported by the Engineer in charge to be no longer required there and to be unfit for further service. The bullocks and cart were purchased by authority granted by the Board.

The sale is authorized.

73 **Guardian of Giant's Tank.**—Memorandum dated 23rd May, 1902, from the Director of Irrigation, stating that the appointment of a Guardian for Giant's tank having been provided for by the Central Irrigation Board and approved of by the Government, he has appointed Mr. J. Phillips, who is now clerk to the Irrigation Engineer, Giant's tank. States that Mr. J. Phillips is well acclimatized and understands masonry and the work of maintenance, and is the most suitable person available for the post. The Government Agent proposed the old retired Adigar of Mantai in preference, on account of his knowledge of the irrigation in the villages below the tank, but as the Guardian's duties do not extend beyond the bund, the Director of Irrigation has appointed Mr. Phillips. The appointment is reported for the information and approval of the Central Irrigation Board.

Approved appointment of Mr. Phillips.

Southern Province.

75 **Additional Commuted Allowance to the Irrigation Inspector.**—Memorandum dated 24th May, 1902, from the Director of Irrigation, stating that the Irrigation Engineer at Tissa has his hands full at present with the improvement of Tissa works and the surveys on the right bank of the river. Proposes to put the maintenance of the Walawe-ganga works in charge of the Irrigation Inspector, Hakmana, increasing his travelling allowance to Rs. 50 per mensem. He now draws Rs. 40. Submits an estimate for Rs. 70 for the additional allowance.

Approved, and estimate sanctioned.

78 **Chief Irrigation Inspector, Southern Province.**—Memorandum dated 26th May, 1902, from the Director of Irrigation, stating that Mr. Ferguson, the Chief Irrigation Inspector, having been selected to proceed to England with the Coronation Contingent, he has instructed the Irrigation Inspector now at Mamadola to take over the duties on his own pay and allowance. Submits the arrangement for the approval of the Board, and states that he could spare Mr. Rodrigo from the work he is engaged on as he is not likely to be required there for some months.

Arrangements approved.

Ref. No.

EASTERN PROVINCE.

50 **Village Tanks.**—The Director of Irrigation submits for the instructions of the Board letter dated 13th March, 1902, from the Government Agent, Eastern Province, suggesting that the services of Messrs. Weerasinghe and Nellalingam, Sub-Inspectors, may be withdrawn, and employed elsewhere to more advantage.

It is ordered that they should be employed elsewhere by the Director of Irrigation.

81 **Vakaneri Scheme.**—The Government Agent, Eastern Province, submits Minutes of Meeting of landowners held at Valachena on the 13th May, 1902, under sections 36 and 47 of Ordinance No. 23 of 1889.

CENTRAL PROVINCE.

72 **Advance for a Bicycle.**—Letter dated 2nd May, 1902, from the Government Agent, Central Province, recommending that Mr. G. Hawkins, Irrigation Inspector, Dambulla, be provided with a cushion tyre bicycle and repay the cost by monthly deductions from his salary.

Mr. Hawkins' request refused on precedent, and the Government Agent informed that Mr. Hawkins can purchase a bicycle from Messrs. Cave or Walker on the monthly instalment system.

74 **Maintenance Estimates, 1902.**—Memorandum dated 24th May, 1902, from the Director of Irrigation, stating that the Government Agent of the Central Province, in submitting his list of Maintenance Estimates for 1902, omitted the following works, viz.:—

(1) Bowatenna channel.
(2) Dambulla tank.
(3) Nicol-oya Upper-ela.
(4) Kurukuloyageamuna.

They were therefore omitted from the list that received the sanction of the Board. On the 11th April, estimates for the maintenance of the above works were received amounting to Rs. 286, Rs. 100, Rs. 100, and Rs. 100 respectively. The Director of Irrigation did not submit these for the sanction of the Board because the estimates sanctioned for 1901 amounted to Rs. 120, Rs. 10, Rs. 25, Rs. 50 respectively, and no explanation was given of the reason of the increase.

Submits a copy of letter dated 17th April, addressed by him to the Government Agent, and of the reply thereto dated 20th May, with the estimates for the consideration of the Board.

It is ordered that the usual votes may be sanctioned and paid over to the Government Agent, who should report what further sums he urgently requires, giving full and complete explanations as to the necessity.

The Government Agent is informed accordingly, and requested to submit estimates for Rs. 120, Rs. 10, Rs. 25, and Rs. 50 respectively.

NORTH-WESTERN PROVINCE.

76 **Tinapitiya Tank.**—Memorandum dated 26th May, 1902, from the Director of Irrigation, submitting an estimate of Rs. 19,431 for improvements at Tinapitiya tank, North-Western Province.

It was decided that a meeting of proprietors should be called for by the Government Agent. A copy of the estimate, plan, and the memorandum forwarded to the Government Agent, and he was requested to hold the requisite meeting of the proprietors of the lands below Tinapitiya, and also of the proprietors of the lands of Pikulam and Mugunuwatawana.

83 **Deduru-oya Works.**—Additional commuted allowance to Mr. Emerson. Memorandum dated 12th June, from the Director of Irrigation, stating that the completion of Deduru-oya works and the maintenance of the completed portions have hitherto been carried on under the supervision of the Irrigation Assistant, Mr. Parker, who has made periodical visits of inspection from Colombo. Mr. Parker proceeding home on leave necessitates other arrangements, and the Director of Irrigation proposes to put the work under the Irrigation Engineer, North-Western Province, Mr. Emerson, who is within accessible distance. It will, however, considerably increase Mr. Emerson's travelling, and recommends that a special commuted allowance of Rs. 30 per month be allowed to Mr. Emerson for supervising this work, and submits an estimate of Rs. 210 to meet the cost.

Authority granted.

ESTIMATES.

The following estimates submitted by the Government Agents and the Director of Irrigation have received the sanction of the Central Irrigation Board:—

	Amount. Rs. c.	Remarks.
Northern Province.		
Maintenance:—		
Kanakarayankulam	200 0 ...	Maintenance, 1902
Sluiced village tanks	500 0 ...	do.
80 Vavunikkulam Scheme, for continuing the surveys and levels at the Vavunikkulam scheme ...	2,500 0 ...	Apportionment, 1902
84 Repairs to house of Sub-Inspector, Mantai, at Malikaitidal	75 0 ...	do.
Southern Province.		
43 02 Magam pattu channel, for completing the survey of the proposed Magam pattu channel... ...	500 0 ...	Apportionment, 1902
64 Kirindi-oya surveys, for surveys and levels on the right bank of the Kirindi-oya	3,000 0 ...	do.
Eastern Province.		
Maintenance:—		
Hakgalawewa tank	33 0 ...	Maintenance, 1902
Maha-oya tank	114 0 ...	do.
46 Quarters for Sub-Inspector, Panama pattu, for a well and fence at the Sub-Inspector's quarters	84 75 ...	—

Ref. No.		Amount. Rs. c.	Remarks.
52	**Vaddikulam** in Periyanilavanai, for the proposed additions of wing walls to old sluice at Vaddikulam in Periyanilavanai in Karavaku pattu	273 20 ...	—
62	**Makilur Periyakulam,** for removing the damaged wing wall and for constructing another in its place for a kalingula in Makilur Periyakulam in Eruvil pattu ...	80 66 ...	—
69	**Quarters for Sub-Inspector of Bintenna,** for the repair of the bungalow at Maha-oya for the quarters of the Sub-Inspector, Bintenna ...	50 0 ...	—
	Western Province.		
	Maintenance:—		
	For maintenance of four tanks at Ragama ...	200 0 ...	Maintenance, 1902
	Attidiya sluice	33 0 ...	do.
61	**Boralesgomuwa tank,** for repairs ...	803 75 ...	Apportionment, 1902
	Central Province.		
	Maintenance:—		
	Karawilahena tank	50 0 ...	Maintenance, 1902
	Nadeniya-amuna	20 0 ...	do.
	Elahera head sluice	25 0 ...	do.
	Village tank sluices	250 0 ..	do.
	Supervision of village tanks	375 0 ...	do.
	Weeragahapelessa-amuna	10 0 ...	do.
	Eraula tank	35 0 ...	do.
	Pelwehera tank	50 0 ...	do.
	Bodi-ela	4 20 ...	do.
	North-Central Province.		
60	**Eliya Divulwewa,** for the reconstruction of the spill wall of Eliya Divulwewa tank	809 67 ...	Apportionment, 1902
45	**Minneri tank,** for the restoration of Minneri tank and main channel*	225,093 0 ...	do.
71	**Epolagama bungalow,** for repairing the Irrigation bungalow at Epolagama	234 0 ...	do.
85	**Cement concrete pipes,** for transport of cement concrete pipes to village tanks	938 0 ...	do.
	Maintenance:—		
	For upkeep of irrigation bungalows in North-Central Province	250 0 ...	Maintenance, 1902
	Province of Uva.		
49	**Sudupanawila-ela,** for rebuilding the damaged and washed away masonry which supports the iron troughing placed on Sudupanawila-ela	305 30 ...	Apportionment, 1902
48	**Alut-ela,** for repairs to the Alut-ela, Badulla ...	3,782 0. ...	do.
	Miscellaneous.		
44	**For payment of damages** to articles claimed by Messrs. Beato & Co.	315 0. ...	Apportionment, 1902
I. D. 257	**For paying a special allowance** to Messrs. Balfour and Hilton, Irrigation Engineers ...	727 50 ...	do.
57	**Surveying instruments,** for purchase of surveying instruments and drawing office requisites ...	194 90 ...	do.
47	**Drawing materials,** for purchasing drawing materials	54 0 ...	do.
75	**For additional commuted allowance** to the Irrigation Inspector, Southern Province ...	70 0 ...	do.
83	**Deduru-oya works,** for additional commuted allowance to Mr. Emerson, Irrigation Engineer ...	210 0 ..	do.
56	**Tent,** for the purchase of a tent complete ...	145 50 ...	do.

GENERAL.

58 **House rent.**—Rent of quarters of Irrigation Inspectors and Sub-Inspectors. Memorandum from the Director of Irrigation, dated 21st April, 1902, stating that with about four exceptions all Inspectors and Sub-Inspectors are provided with free house accommodation, or with a sum for paying rent of quarters occupied by them, and requesting authority of the Board to allow a charge not exceeding Rs. 10 per mensem to be passed in other cases, so that all may receive equal treatment.

Authority granted.

MODE OF REPAYMENT, OR CONDITIONS.

a.—Repayment to be made in annual instalments.
b.—Rate in perpetuity for interest and upkeep in lieu of repayment.
c.—Gratuitous. No payment to be made in respect of this expenditure.

WEST RIDGEWAY,
EVERARD IM THURN,
Presidents.

* Previous expenditure to end of 1901, Rs. 80,601·91.

HIS EXCELLENCY THE LIEUTENANT-GOVERNOR (THE HON. EVERARD FERDINAND IM THURN, C.B., C.M.G.), *President.*

THE DIRECTOR OF PUBLIC WORKS (THE HON. MR. F. A. COOPER, C.M.G.).

THE SURVEYOR-GENERAL (MR. P. D. WARREN, *Acting*, AND MR. F. H. GRINLINTON).

MR. A. DE A. SENEVIRATNE.

MR. P. COOMARASWAMY.

THE HON. MR. S. C. OBEYESEKERE, M.L.C.

THE DIRECTOR OF IRRIGATION (MR. H. T. S. WARD).

Secretary, MR. F. J. TOTHILL.

Ref. No.

THE Papers dealt with by circulation among the Members between the **1st July** and **30th September, 1902**, are recorded as follows :—

GENERAL.

41 **Draft Report** of the Central Irrigation Board and Provincial Reports on Minor Irrigation Works for 1901.

The Director of Public Works considers certain remarks, marked in page 2 (report of the Government Agent, Central Province), are not proper remarks to include in an Administration Report.

His Excellency agrees with the Director of Public Works and some others that the remarks which he (the Director of Public Works) has bracketed are not suitable for a published report published under authority. These must be omitted, otherwise the report may be printed.

The remarks referred to omitted and report returned to the Printer to be printed accordingly.

57a **Surveying Instruments.**—The Director of Irrigation submits an amendment on Estimate No. 116 of 1902 for Rs. 194·90, for purchase of surveying instruments and drawing office requisites for the Irrigation Department. The amendment becomes necessary owing to higher rates and charges by the Government Stores.

Amendment sanctioned.

94 **Minutes of Proceedings** of the Central Irrigation Board from 1st April to 30th June, 1902.

Approved and sent to the Printer.

56a **Tents.**—Memorandum dated 11th August, 1902, from the Director of Irrigation, submitting a report on the tents in use by the Irrigation Department, with an estimate for Rs. 265 for purchasing two tents complete.

The Director of Irrigation is of opinion that it would be desirable to obtain patent Willesden canvas from England and have the tents made out here.

The estimate for Rs. 265 is sanctioned. His Excellency, the President, states that Willesden canvas answered with him very well in the very similar climate of Guiana, and should, he thinks, be tried here.

112 **Movement of Irrigation Engineers.**—Memorandum dated 20th August, 1902, from the Director of Irrigation, stating that owing to Mr. Hilton's illness he has sent Mr. Doxat to continue the surveys of Mahakanadarawa tank:

He has instructed Mr. Bradley to take up the surveys of Akattimurrippu scheme, leaving Mr. Watts to complete the trace of the channel connecting Mahagalkadawela with Pavatkulam.

Approved.

NORTHERN PROVINCE.

18 **Pavatkulam.**—Memorandum dated 5th February, 1902, from the Director of Irrigation, submitting an estimate of Rs. 224,422 for the restoration of Pavatkulam, together with eleven sheets of plans.

The papers were referred to the Director of Public Works, with reply from the Director of Irrigation with reference to his query regarding provision for discharging flood water during construction, and recirculated.

The Director of Irrigation was requested to supply the Board with an estimate of the additional cost which would be involved in making the spill 800 ft., and also a further expression of opinion on the total cost per acre of field benefited.

The Director of Irrigation submits four estimates for increasing the spill by 100 ft., 200 ft., 300 ft., and 400 ft., respectively, amounting to Rs. 5,096, Rs. 6,950, Rs. 9,610, and Rs. 13,750.

It is possible that the complete channels will cost a further sum of Rs. 84,000.

This sum, with the Rs. 13,750 for the extra 400 ft. of spill, will bring the total cost to Rs. 321,750, or Rs. 42 per acre approximately.

The papers were recirculated for opinions on the revised estimate.

The order of His Excellency, the President, is—

> The expenditure is too great, and the scheme too purely speculative. I have it on good authority (I wish I knew the ground myself), that the land to be irrigated is too far from roads and railways, and is too sparsely populated to be very attractive. Rs. 40 an acre is too great an expenditure on such land, though the work might have been worth doing at a cheaper rate. I cannot sanction the scheme.

SOUTHERN PROVINCE.

97 **Badagiriya Tank.**—Memorandum dated 5th August, 1902, from the Director of Irrigation, stating that the Government Agent urges the investigation of this tank, which is supplied by the Mallalaaru near Hambantota, and the Colonial Secretary has requested that the matter be brought before the Central Irrigation Board. There is a plan and sections of the bund made in 1894–1895. There is, however, nothing on these plans to show the capacity of the tank, or the area of its water surface, or the land which it will irrigate. The topographical surveyors have been working in this locality, and the result will probably throw a useful light on the subject.

Ref. No.

States that at present he has not an officer to spare to take up this investigation, but on the completion of the work on the right bank of the Kirindi-ganga and the left bank of the Walawe-ganga this work can be taken up, if considered desirable by the Central Irrigation Board.

The order of His Excellency, the President, is that this is a matter in which he takes a personal interest, and as far as he has been able to ascertain there seems no doubt that the restoration of Badagiriya tank should be seriously taken in hand. The preliminary steps suggested in these papers should be taken at the earliest possible time.

78a **Mr. Ferguson, Chief Irrigation Inspector, Southern Province.**—Memorandum dated the 14th August, 1902, from the Director of Irrigation, stating that Mr. Ferguson, the Chief Irrigation Inspector, Southern Province, has been granted an extension of his leave of absence from the 14th August, 1902, for one month on half salary, and recommending that Mr. Rodrigo, Irrigation Inspector, who is now acting for him, may be allowed to continue to act, and that he be paid salary at the rate of Rs. 1,500 per annum from the available half salary of Mr. Ferguson.

This is the salary that was paid to Mr. Meurling on a previous similar occasion.

Approved.

EASTERN PROVINCE.

95 **Kondavaddavan, Amparai, and Velattapatti.**—Memorandum dated 4th July, 1902, from the Director of Irrigation, submitting an estimate for Rs. 429,436 for the construction of irrigation works at Kondavaddavan, Amparai, and Velattapatti.

The proposed works are situated on the Pattipola-aru, in the Eastern Province, 42 miles south of Batticaloa and about 15 miles west of the main road from Batticaloa to Hambantota.

They comprise the construction of an anicut on the Madugaha-ela, a branch of the Pattipola-aru, and a channel therefrom to a tank to be made near Kondavaddavan.

From this tank a high-level channel, less than 1 mile in length, will be made to the existing tank at Amparai in order to ensure its regular filling. It at present depends for its supply on the height to which the floods rise in the Pattipola-aru, and during floods is now filled by water entering it through its own sluice and over its own spill. The water level in Amparai tank is to be raised one foot.

A second anicut is to be constructed 11 miles east of the first on the Moravil-aru, from which a channel will be taken to the ancient tank of Velattipatti. This tank is to be restored by repairing the breaches, raising the bund, and providing spills and sluices. Provision is made in the estimate for the construction of an outlet from the second anicut, by which water can be supplied to land on the right bank of the Moravil-aru, the channel from which will be made by the landowners.

Estimate sanctioned.

110 **Christie and Le Mesurier's Land under Kantalay Tank.**—Papers 015096 from the Colonial Secretary, forwarding correspondence regarding the advisability of the re-purchase of 390 acres of land sold in 1877 to Messrs. Le Mesurier and Christie, and stating that if the Board considers the expenditure justified, it can be so settled and payment made from the Irrigation Fund.

It is ordered that only the land at present required for the completion of the work in hand should be acquired.

CENTRAL PROVINCE.

82 **Elahera Irrigation Works; Maintenance, 1902.**—Memorandum from the Director of Irrigation, dated 10th June, 1902, submitting letter dated 9th June from the Government Agent, Central Province, and connected correspondence, with reference to a charge for removing rock from the channel at Elahera.

States that the headworks and channel at Elahera were constructed by Government at a cost of Rs. 55,430·31, and the area irrigated is 180 acres. The rate per acre, therefore, is Rs. 307·95. This is the amount of capital actually spent on each acre of irrigated land.

In 1893 the Central Irrigation Board exempted the landowners from the payment of any rate, and also decided that the headworks should be maintained by the Central Irrigation Board and the channel handed over to the landowners.

This has been done for nine years, but a short time back six boulders of rock fell into the channel, which were removed by the District Engineer at the request of the Assistant Government Agent at a cost of Rs. 20, or 11 cents per acre.

The resolution of the Central Irrigation Board of 24th March, 1893, runs thus :—

> "Elahera.—The landowners to be held to be exempted from liability to pay a rate for interest and upkeep. The headworks to be maintained by the Irrigation Board, *and the ela handed over to the care of the landowners.*"

The Government Agent considers that the Central Irrigation Board should pay for the removal of these boulders, but the Director of Irrigation has refused to submit the estimate in view of the above resolution.

The Government Agent had in hand Rs. 3,268·37 at the end of last year from Irrigation fine money, from which the charge might have been met with the sanction of Government.

The order of His Excellency, the President, is that a sum of 11 cents per acre be recovered from the landowners to pay for the cost of the removal of the boulders, and in future the channel which has been handed over to the villagers be left to them.

The Government Agent is informed accordingly.

99/02 **Palliawela-amuna.**—Memorandum dated $\frac{\text{8th January, 1902}}{\text{5th August, 1902}}$, that the papers concerning Palliawela-ela are recirculated, as the Government Agent, Central Province, is pressing for an officer to be sent up to make the necessary measurements and survey. There is no mistake as to the acreage benefited, viz., 13 acres, which at the maximum rate of Rs. 2 per annum would yield a revenue of Rs. 26. For the Rs. 26 the work would have to be maintained for the villagers and interest on the capital paid. It is estimated that a headwork is required, and at least a mile of channel. The cost of the survey alone is estimated at Rs. 170, or Rs. 13 per acre. The construction it is not possible to estimate at present. The cost of the maintenance of the headwork and the channel will certainly

Ref. No.

not be done for less than Rs. 5 per month, or Rs. 34 more than the total revenue to be yielded, and the loss, therefore, must be the cost of the work whatever it may be and the interest on that cost, and an annual sum of Rs. 34 at least in perpetuity.

States that he is of opinion that unless it is undertaken as a work of charity it should not receive any further consideration.

Memorandum dated 6th August, 1902, from the Director of Irrigation, stating that he regrets that these papers appear to have been mislaid. He wrote the memorandum on the 5th January, and it was apparently typed at the time, but placed by mistake among some other papers that had been dealt with and were not required.

The matter in the meantime was reopened by the Government Agent asking for money for the survey, but though the villagers are represented as anxious for the work, they will not clear the jungle along the ela to enable the Irrigation Sub-Inspector to survey it, and the Government Agent considers that, having agreed to pay a rate, "it is not equitable or usual to ask them to incur any preliminary expenditure in surveys."

States that the work does not seem to be one that should be undertaken at all, as evidently it is not considered an eleemosynary work by the Government Agent.

The order of the President is that the Government Agent's request should be declined.

The Government Agent is informed accordingly.

108 **Minor Irrigation Surveys.**—Memorandum dated 13th August, 1902, from the Director of Irrigation, transmitting five estimates for surveys submitted by the Government Agent, together with copies of reports made on them by the Irrigation Sub-Inspector, Kandy.

States that none of the works are works that should be taken up by the Central Irrigation Board except as works of charity, and no necessity for such charitable relief is even suggested by the Government Agent.

The order of His Excellency is that the estimates cannot be sanctioned.

The Government Agent is informed that the Central Irrigation Board, before whom the five estimates and reports forwarded with his letter have been laid, have unanimously resolved that the estimates should not be sanctioned.

North-Central Province.

90 **Village Tank Staff.**—Memorandum dated 5th July, 1902, from the Director of Irrigation, stating that the temporary appointment of an Irrigation Inspector having been applied for by the Government Agent, North-Central Province, for the duty of picketing the bunds of several important village tanks in Nuwaragampalata and Kalagampalata, and of supervising the performance of earthwork, has appointed Mr. C. Chellaturai, Assistant Irrigation Surveyor, at present in the Head Office, to proceed to the North-Central Province to perform the duties required.

Approved.

100 **Mahagalkadawala Tank.**—Memorandum dated 20th June, 1902, from the Director of Irrigation, submitting an estimate of Rs. 415,161 for the restoration of Mahagalkadawala tank.

This ancient tank is situated near Madawachchiya, in the North-Central Province, and about 4 miles south-west of the 94th milestone on the Kandy-Jaffna road.

It was formed by a bund 2 miles in length crossing the Kanadara-oya and Weli-oya about half a mile above their junction. This bund is now breached, there being three main and several smaller breaches.

It is proposed to restore the tank by closing the breaches in the bund with earthen embankments and by repairing the spill waters, and to increase its capacity by raising the level of the existing spills and bund. The tank so formed will have a top water area of 3,011 acres, a depth of 16 ft. above the sill of the lowest sluice, and a capacity of over 894 million cubic feet.

The estimate is sanctioned.

The papers are forwarded to the Colonial Secretary with a request, if necessary, to place them before the Legislative Council.

102 **Nachchaduwa Tank.**—Memorandum dated 7th August, 1902, from the Director of Irrigation, submitting an estimate for Rs. 450,735 for the restoration of Nachchaduwa tank, North-Central Province.

This ruined tank is situated about 9 miles south-east of Anuradhapura and 2 miles south-west of the 76th milestone on the Kandy-Jaffna road.

The tank was formed by an earthen bund 1 mile in length across the Malwatta-oya. The bund has one large breach through which the river now flows, and also three smaller ones.

It is proposed to close the breaches in the embankments with earthen bunds and to restore and lengthen the existing spill and to raise the top water 8 ft. above its former level, the bund being of a sufficient height to permit of this being safely done.

The tank when completed will have a top water area of 3,920 acres and a capacity of 1,600 million cubic feet.

The estimate is sanctioned.

The papers are forwarded to the Colonial Secretary, if necessary to be placed before the Legislative Council.

104 **Manankettiya Tank.**—Memorandum dated 13th August, 1902, from the Director of Irrigation, submitting an estimate for Rs. 17,700 for the repair of Manankettiya tank.

The tank is formed by damming the Malwatta-oya at a point about 20 miles south-east of Anuradhapura.

The tank is a large one, it at present holds up 14 ft. of water at the sluice, and has an area of nearly 900 acres. The estimate provides for the taking out of the existing culvert and bisokotuwa and building a new sluice and culvert with a sluice gate 4 ft. by 3 ft. 6 in., as it may be requisite to pass considerable quantities of water down the valley in the future. It also provides for strengthening the weak portions of the bund and raising it when required. A small sum is provided for repairing the spill, which has been somewhat damaged.

The estimate is sanctioned against the apportionment to the North-Central Province.

Ref. No.

91 **Increase of Salary to Mr. T. D. M. Stephen,** Irrigation Clerk to Government Agent, Province of Sabaragamuwa.—Memorandum dated 7th July, 1902, from the Director of Irrigation, stating that application having been made to him for an increase of salary by Mr. T. D. M. Stephen, at present Irrigation Clerk to the Government Agent, Province of Sabaragamuwa, he proposes to grant his request and to increase his salary from Rs. 30 per month to Rs. 40 per month. The increase to take effect from 1st January, 1903. Mr. Stephen was appointed by him in February, 1901, and has performed his duties to his satisfaction and to the satisfaction of the Government Agent.

Requests sanction of the proposed increase.

A list of all the irrigation clerks is submitted.

It is ordered that the increase should be given all round; *i.e.*, to all those on the list who now only get Rs. 360 per annum.

Application made to the Colonial Secretary for provision accordingly.

ESTIMATES.

The following estimates, submitted by the Government Agents and the Director of Irrigation have received the sanction of the Central Irrigation Board :—

	Amount. Rs. c.	Remarks.
Northern Province.		
109 Akattimurrippu scheme, for preliminary surveys	1,800 0 ...	Apportionment, 1902
11 Palakuli tank, for erecting a sluice at Palakuli tank, in the Mannar District	652 0 ...	do.
Southern Province.		
101 Denegama timber bridge, for renewing the timber bridge 20 ft. span over the inlet channel of Wepata-ela sluice, Denegama tank	250 0 ...	Apportionment, 1902
114 Timber bridge at Urubokka, for renewing the timber bridge 20 ft. span over the spill water on the minor road at Urubokka	390 0 ...	do.
Eastern Province.		
88 Pullumalai tank, for repairs	223 43 ...	Apportionment, 1902
122 Manufacture and transport of cement pipe sluices, for the manufacture and transport of special vertical pipes to bear up the pressure of 12 ft. head of water at Gomarasankadulwewa and one set of 6-in. cement pipe sluices at Dewelwewa, Trincomalee District	175 0 ...	do
Western Province.		
Nikatu-ela sluice, for upkeep of ...	136 0 ...	Maintenance vote, 1902
Central Province.		
120 Waluganwewa, for adjusting the sluice ...	140 0 ...	Apportionment, 1902
74 Maintenance :—		
Bowetenne channel	120 0 ...	Maintenance, 1902
Dambulla tank	10 0 ...	do.
Nicol-oya upper ela	25 0 ...	do.
Kurukulayaye amuna	50 0 ...	do.
North-Central Province.		
87 Filling of stagnant pond, for filling up the pond between the Irrigation Engineer's and Superintendent of Survey's bungalows, Anuradhapura, leaving only a channel from the drinking pokuna to Bassawakulam ...	679 38 ...	Apportionment, 1902
104 Manankettiya tank, for repair of ...	17,700 0 ...	do.
123 Kaduruwegama lands, for constructing an irrigation channel to serve 500 acres of land irrigable under the Kalawewa-Yoda-ela	1,803 9 ...	do.
North-Western Province.		
86 Deduru-oya works, for improvements and completion of works at the Deduru-oya works ...	20,819 0 ...	Apportionment, 1902
89 Deduru-oya works (supplementary), providing for the pay of a clerk during the construction of the Deduru-oya works	960 0 ...	do.
93 Tank works, for establishing a factory for making cement concrete pipes and for sluicing village tanks in the Chilaw District	710 0 ...	do.
For making 9-in. pipes, &c., for sluicing village tanks in the Chilaw District	3,150 0 ...	do.
Province of Uva.		
96 Buttala anicut, for repairs to Buttala anicut and channel	295 0 ...	Apportionment, 1902
113 Kalupahana-ela, for replacing the damaged troughing on Kalupahana-ela	71 70 ...	do.
117 Hambegamuwa irrigation bungalow, for rethatching with straw the roof of the bungalow ...	64 75 ...	do.
116 Mackerakatti tank, for the survey of a proposed tank at Mackerakatti on the Gal-oya	2,000 0 ...	do.

Ref. No.		Amount. Rs. c.	Remarks.
	General.		
92	**Tent**, for the purchase of a tent complete ...	132 50 ...	Apportionment, 1902
56*a*	**Tents**, for the purchase of two tents complete ...	265 0 ...	do.
I D 179	For erecting a temporary office for the Director of Irrigation	7,220 0 ...	do.
I D 259	**For paying a special allowance** to Mr. C. D. Watts, Irrigation Engineer	225 0 ...	do.
I D 259	**For paying a special allowance** to Mr. F. E. Hilton, Irrigation Engineer	300 0 ...	do.

MODE OF REPAYMENT, OR CONDITIONS.

a.—Repayment to be made in annual instalments.
b.—Rate in perpetuity for interest and upkeep in lieu of repayment.
c.—Gratuitous. No payment to be made in respect of this expenditure.

EVERARD IM THURN,
President.

HIS EXCELLENCY THE LIEUTENANT-GOVERNOR (THE HON. EVERARD FERDINAND IM THURN, C.B., C.M.G.).

HIS EXCELLENCY THE GOVERNOR (THE RIGHT HON. SIR J. WEST RIDGEWAY, G.C.M.G., K.C.B., K.C.S.I.), *President*.

THE DIRECTOR OF PUBLIC WORKS (THE HON. MR. F. A. COOPER, C.M.G.).

THE SURVEYOR-GENERAL (MR. F. H. GRINLINTON).

MR. A. DE A. SENEVIRATNE.

MR. P. COOMARASWAMY.

THE HON. MR. S. C. OBEYESEKERE, M.L.C.

THE DIRECTOR OF IRRIGATION (MR. H. T. S. WARD).

Secretary, MR. F. J. TOTHILL.

THE Papers dealt with by circulation among the Members between the **1st October** and **31st December, 1902**, are recorded as follows :—

NORTHERN PROVINCE.

126 **Giant's Tank.**—Memorandum dated 23rd September, from the Director of Irrigation, submitting an estimate for Rs. 7,654·64 for the completion of the Giant's tank works. States that an estimate amounting to Rs. 304,402 was submitted to the Central Irrigation Board for the completion of the Giant's tank works on the 2nd March, 1902. This amount will be insufficient. After cutting the spill provided for in the estimate it was found that, while the ground immediately in front of it fell for some distance, it afterwards rose again, and owing to the existence of a considerable ridge the escape of water was prevented. The necessary levels having been taken, it has been found to be more economical to provide a short spill in a new spot than to cut the channel required to give the full discharge from the spill as originally designed. There might have been a saving on the item of Rs. 10,000 for minor channels provided in the estimate, but it having been found that the making of these could be avoided, and the efficiency of the works increased by the construction of an extra sluice at the north end of the bund, this has been done. The original estimate as amended will be submitted to the Central Irrigation Board before the completion of the work. The estimate now submitted is for the extra sum required to finish the new spill; and as the money originally voted is exhausted, he has permitted the cutting of it to proceed pending the sanction of the Central Irrigation Board, which is now applied for.

118 **Purchase of Carts and Bulls.**—Memorandum dated 12th September, from the Director of Irrigation, stating that authority was given to purchase carts and bulls for transport at Giant's tank, Minneri, Kalawewa, and Rugam, as it was found impossible to hire them; and that he has granted authority to the Irrigation Engineer, Karachchi, to purchase a pair of bulls and a cart in anticipation of sanction. More will probably be required in the future.

Requests covering authority of the Central Irrigation Board to purchase four or five carts for use for the Karachchi works as they are required.

Authority granted.

140 **Advance to purchase a Horse for Mr. N. M. Walker.**—The Director of Irrigation submits for favourable consideration application from Mr. N. M. Walker, Irrigation Engineer, Giant's tank, for an advance of Rs. 600, to enable him to buy a suitable horse for his use. The amount to be recovered from his pay in twelve monthly instalments.

Advance authorized, and application made to Government to instruct the Treasurer to advance the amount to the Director of Irrigation accordingly.

Ref. No.

SOUTHERN PROVINCE.

125 **Advance to purchase a Horse for Mr. Ferguson.**—The Director of Irrigation submits for favourable consideration letter dated 22nd September, from the Government Agent, Southern Province, forwarding an application from Mr. Ferguson, Chief Irrigation Inspector, for an advance of Rs. 500 for the purchase of a horse, the sum to be paid in monthly instalments of Rs. 50 each.

Advance authorized. Application made to Government to instruct the Treasurer to advance the amount to the Director of Irrigation accordingly.

EASTERN PROVINCE.

137 **Chief Irrigation Inspector, Mr. Booth.**—Memorandum from the Director of Irrigation, dated the 23rd October, 1902, submitting a copy of his letter dated 14th October to the Government Agent, Eastern Province, and of his reply dated 18th October, with reference to the Central Irrigation Board papers No. 103 of 1902 (strengthening of village tank staff, North-Central Province), proposing to remove Mr. F. Booth, at present Chief Irrigation Inspector, Eastern Province, and place him under the Government Agent, North-Central Province, in charge of the irrigation works in one-half of the Province, and to remove Mr. Outschoorn to the North-Central Province as Sub-Inspector.

The Director of Irrigation states there will be no difficulty in arranging for the periodical inspection of Mr. De Hoedt's pipe factory in Batticaloa as desired by the Government Agent.

The order of His Excellency the President is: "I agree, with regret. It is the last and logically necessary step in the present Government Agent's policy of abandoning the restoration of the Crown tanks in Bintenna. When I have time and opportunity I intend to take up the matter; in the meantime I agree to Mr. Booth's withdrawal.

"Please send copy of correspondence with the Government Agent, Eastern Province, including his letter of 13th March, 1902, to the Hon. the Colonial Secretary."

Papers sent to the Colonial Secretary accordingly.

CENTRAL PROVINCE.

77 **Bolagandawela Scheme.**—Letter dated the 23rd May, 1902, from the Hon. the Colonial Secretary, transmitting for the consideration of the Central Irrigation Board papers relating to the Bolagandawela Irrigation Scheme in the Nuwara Eliya District, and stating that His Excellency the Lieutenant-Governor desires that the Board should dispose of the question.

The papers were circulated in the Central Irrigation Board.

The matter was postponed pending a visit to the spot by His Excellency the President.

115 **Lamasuriyagama-ela.**—Memorandum from the Director of Irrigation, dated 4th September, 1902, submitting an estimate for Rs. 5,140 for improving and the extension of the Lamasuriyagama-ela. States that the estimate appears to have been submitted and to have been accepted by the landowners. If the estimate receives the sanction of the Central Irrigation Board, he does not know how it is intended to carry out the work. The estimate was prepared by the Provincial Engineer, Central Province, and his report is annexed. He does not know whether it is intended that the construction should be carried out by him, utilizing the Irrigation Sub-Inspector of the Nuwara Eliya District. Regrets that he is unable to make satisfactory arrangements for carrying out this small work, the situation is so very remote.

The papers were circulated in the Central Irrigation Board, and the final order of His Excellency is: "When convenient the Irrigation Engineer should examine this scheme, until then it must remain in abeyance."

144 **Improvements to Minor Irrigation Works.**—Memorandum dated the 15th November, 1902, from the Director of Irrigation, submitting for report of the Central Irrigation Board letter No. 214 of 11th November from the Hon. the Colonial Secretary, enclosing copies of extracts from a letter received from the Hon. the Government Agent, Central Province, relative to the above subject.

The Director of Irrigation submits a review of the different estimates for minor irrigation works referred to by the Government Agent.

The order of His Excellency is: "Let a copy of the Director of Irrigation's report and of the minutes recorded on it be sent to Government. I should like to have a list of minor works and surveys which have been authorized by the Board during 1902. It should accompany the above papers unless this should involve delay."

Papers ordered sent accordingly to the Colonial Secretary.

NORTH-CENTRAL PROVINCE.

103 **Strengthening of Village Tank Staff.**—Letter from the Government Agent of 16th July, 1903, urging the importance of strengthening the village tank staff in the Province—

(1) By reverting to the original arrangement by which this Province consisted of two divisions, a northern and a southern, each under a Chief Irrigation Inspector; one Chief Irrigation Inspector is insufficient for the whole Province, and there should be two such officers, one in charge of the northern and the other the southern division.

(2) By increasing the number of Inspectors, that apart from the present staff of Inspectors, whose whole time is at present occupied, and is likely to be occupied for the next four or five years, in supervising the performance of the earthwork required to complete the restoration of the old village tanks, there should be two or three other officers available for other urgent work, particularly that connected with Crown tank restoration on permit.

Order of His Excellency the President: "I think the Second Chief Irrigation Inspector *and* the additional Sub-Inspectors for whom the Government Agent asks should be given. As I read the Director of Irrigation's minute, Director of Irrigation is of opinion also, though at the end of his minute he only specifically approves of the additional Chief Irrigation Inspector."

Ref. No.

If there is any doubt as to the Members of the Board generally approving of the Government Agent, North-Central Province's recommendation *as a whole*, please re-circulate.

Re-circulated. The Director of Irrigation recommends a Second Chief Irrigation Inspector and two additional Sub-Inspectors at present.

The appointment of the additional Chief Irrigation Inspector and the appointment for so long as they may be required of two additional Sub-Inspectors is sanctioned.

121 **Memorial from Inhabitants of certain Korales, North-Central Province.**—Letter dated 8th September, from Mr. Charles Batuwantudawe, Advocate, forwarding copy of a petition addressed to His Excellency the President and Members of the Central Irrigation Board, from the inhabitants of certain korales in the North-Central Province, complaining of vexatious prosecutions under the Village Communities' Ordinance, and praying for the appointment of a special independent Commission to investigate the matter complained of, &c.

The original petition was forwarded direct to His Excellency the Lieutenant-Governor.

His Excellency the President agrees with the other Members that this matter is outside the sphere of the Board. But he adds that the original petition has been forwarded by him to the Government Agent, North-Central Province, who is dealing with it very exhaustively, after which it will be dealt with by His Excellency the Governor.

NORTH-WESTERN PROVINCE.

130 **Tinipitiwewa Scheme.**—Endorsement 52 of 24th September, 1902, from the Colonial Secretary, forwarding papers from the Government Agent, North-Western Province (016411), with an address from the Chilaw Association to His Excellency the Governor on his recent visit to Chilaw, for the information of, and for any action that may be desirable by, the Board.

Papers returned to the Colonial Secretary, stating that they have been submitted to the Central Irrigation Board, and annexing the remarks of the Members for perusal and return.

The Director of Irrigation states that the meeting was held, but no result or decision was arrived at except to obtain the views of a local proctor and proprietor, many of whose statements are, he considers, incorrect and erroneous. The matter has received full consideration both by himself and by Mr. Parker, and he is of opinion that the works suggested are the best that can be designed for the purposes required.

Reply dated 8th December, 1902, from the Colonial Secretary, informing that His Excellency the Governor has been pleased to sanction the estimate of Rs. 19,431 for the proposed improvement of Tinipitiwewa tank, and that His Excellency has also decided that this work be undertaken by the Government as an act of grace, the cost being charged to Irrigation Funds without contribution from the proprietors of fields below the tank, who will only be required to pay the rate of Re. 1 per acre hitherto recovered by them.

Requests to proceed with the work at once.

145 **Rent of Office.**—Memorandum dated the 15th November, 1902, from the Director of Irrigation, submitting letter dated the 12th instant, from the Government Agent, forwarding an application from Mr. Goonewardene, Chief Irrigation Inspector, North-Western Province, for rent for the office he has had at his residence from 1888 up to the present time at Rs. 10 per mensem.

The Director of Irrigation states that the only Chief Irrigation Inspector who has a house provided for him is the Chief Irrigation Inspector of the Northern Province, and he presumes he pays house rent.

The office of the Chief Irrigation Inspector should be in the Kachcheri.

The application for rent is refused and the Government Agent informed accordingly.

PROVINCE OF UVA.

141 **Etimolawewa.**—Memorandum dated the 5th November, 1902, from the Director of Irrigation, submitting a letter dated 25th October, from the Government Agent, Uva, and an estimate of Rs. 1,500 for the preliminary surveys of Etimolawewa.

States that the tank is an ancient work lying about 8 miles from Mupane, it is in a very out-of-the-way district, but there appear to be a number of villages in the vicinity. He visited it a short time back, and was surprised at the number of men he met on the way. The Korala, who lives at Korana, 5 miles away, and all the villagers about appeared very anxious to have the work taken up.

The bund appears to be mostly natural hill, and there is only one breach of importance in it, and that is a rocky one through which the Wila-oya runs.

The people live entirely on chena produce, and are anxious to possess paddy lands. Recommends the scheme for investigation; it is not a very big undertaking, and is likely to be unusually beneficial.

Annexes a topographical sheet showing the tank coloured red and its watershed, which is small and defined.

The estimate for surveys is sanctioned.

PROVINCE OF SABARAGAMUWA.

154 **Inspection in Province of Sabaragamuwa.**—Memorandum dated the 12th December, 1902, from the Director of Irrigation, transmitting copy of report by Mr. O. W. Henman, Irrigation Engineer, on certain irrigation works in Sabaragamuwa—an examination of which was undertaken at the request of the Government Agent—for the information of the Central Irrigation Board.

To His Excellency the President's inquiry what action it is proposed to take, the Director of Irrigation states, that it appears evident from the letters he has received from the Government Agent, Sabaragamuwa, that the Irrigation Sub-Inspector there is incompetent to carry on the work in the Province, and this is confirmed by Mr. Henman's reports. He has obtained the services of another person, who promises to be of more use, and he is sending him at once to carry out the various repairs needed under Mr. Henman's supervision. He is dealing with Mr. Ratnayaka's case in another paper.

Ref. No.

106 **Salaries and Allowances, 1903** (Vote Rs. 50,418).—The following schedule of salaries and allowances chargeable against this vote for 1903 is sanctioned, and estimates passed accordingly :—

Office or Present Duty.	Name.	Nature of Allowance.	Salary. Rs.	Allowance. Rs.
	HEADQUARTERS.			
Director of Irrigation	Mr. H. T. S. Ward	Horse allowance	—	420
One Irrigation Engineer	Mr. O. W. Henman	Commuted allowance	—	600
Do.	(Vacant)	do.	—	600
Do.	do.	do.	—	600
One Assistant Irrigation Engineer	do.	do.	—	360
One Irrigation Surveyor	do.	do.	—	360
Do.	do.	do.	—	360
One Irrigation Assistant Surveyor	do.	do.	—	240
Do.	do.	do.	—	240
Do.	do.	do.	—	240
Do.	do.	do.	—	240
One Irrigation Sub-Inspector	Mr. A. Kirthisinghe	do.	—	240
Do. do.	(Vacant)	do.	—	360
Do. do.	do.	do.	—	240
Do. do.	do.	do.	—	240
Do. do.	do.	do.	—	240
	NORTHERN PROVINCE.			
	Under the Director of Irrigation.			
One Irrigation Engineer	Mr. W. Brown	Commuted allowance	—	600
Do.	Mr. G. T. Bradley	do.	—	600
Do.	Mr. C. F. S. Baker	do.	—	600
Do.	Mr. N. M. Walker	do.	—	600
Do.	Mr. M. Sanmukam	do.	—	360
One Irrigation Surveyor	Mr. O. D. Werkmeister	do.	—	360
One Head Overseer	—	do.	—	—[1]
One Irrigation Sub-Inspector	Mr. H. A. Jayawickrama	do.	—	240
	Under the Government Agent.			
One Chief Irrigation Inspector	Mr. E. R. McDonnell	Commuted allowance	—	1,200
One Irrigation Sub-Inspector	Mr. E. J. Meurling	do.	—	360
Do.	Mr. V. Vraspillai	do.	—	360
Do.	Mr. V. Pirasudi (acting)	do.	—	240
Do.	Mr. A. Rajacariar	do.	—	240
Do.	Mr. S. Kartigesu	do.	—	240
	SOUTHERN PROVINCE.			
	Under the Director of Irrigation.			
One Irrigation Engineer, Walawe and Tissa	Mr. R. S. Llewellin	Commuted allowance	—	600
Do.	do.	Horse allowance	—	—[2]
Do.	—	Commuted allowance	—	—[3]
One Irrigation Inspector	Mr. G. B. de Zilva	do.	—	480 / 120[4]
Do.	Mr. A. C. Rodrigo	do.	—	480
One Irrigation Surveyor	Mr. M. A. Vasagam	do.	—	240
	Under the Government Agent.			
One Chief Irrigation Inspector	Mr. W. Ferguson	Commuted allowance	—	1,200
One Sub-Inspector	Mr. F. P. van Houten	do.	—	240
One messenger	—	—	—	—
	EASTERN PROVINCE.			
	Under the Director of Irrigation.			
One Irrigation Engineer, Sakamam	Mr. J. Halilley	Commuted allowance	—	600
Do. do.	do.	Horse allowance	—	—[5]
Do. Vakaneri	Mr. G. J. O'Brien	Commuted allowance	—	600
Do. Unnichchai	Mr. R. F. Morris	do.	—	600
Do. Rugam	Mr. J. H. C. Chute	do.	—	600
Do. Kondavad-davan	(Vacant)	do.	—	600
One Irrigation Inspector	Mr. A. Nagamuttu	do.	—	480 / 120[6]
One Irrigation Surveyor	Mr. C. Muttuvelu	do.	—	240
One Irrigation Sub-Inspector	Mr. C. A. David	do.	—	240
Do.	Mr. G. C. Bartlett	do.	—	240
Do.	Mr. F. S. Muttiah	do.	—	240
One Irrigation Assistant Surveyor	Mr. P. Murugasoe	do.	—	240
	Under the Government Agent.			
One Chief Inspector[7]	—	—	—	—
One Irrigation Sub-Inspector	Mr. H. N. de Hoedt	Commuted allowance	—	360
Do.	Mr. V. Nellalingam	do.	—	240
One messenger to Sub-Inspector, Panama	—	—	—	—[3]
		Carried over	—	20,332

[1] No longer required. [2] Horse allowance ceased from July 1, 1902. [3] Not required.
[4] Increase authorized by Central Irrigation Board, June 1, 1902.
[5] Horse allowance ceased from October, 1902.
[6] Increase recommended to Central Irrigation Board. The work of the Inspector will be increased in 1903.
[7] Mr. Booth, Chief Inspector, and Mr. Outschoorn, Sub-Inspector, transferred to the North-Central Province under the Government Agent.

Office or Present Duty.	Name.	Nature of Allowance.	Salary. Rs.	Allowance. Rs.
		Brought forward ...	—	... 20,332
	WESTERN PROVINCE.			
	Nil.			
	CENTRAL PROVINCE.			
	Under the Director of Irrigation.			
	Nil.			
	Under the Government Agent.			
One Irrigation Inspector ...	Mr. G. Hawkins ...	Commuted allowance ...	—	... 480 [1]
One Irrigation Sub-Inspector ...	Mr. J. L. Caspersz ...	do. ...	—	... 360
Do. ...	Mr. W. E. Lucas ...	do. ...	—	... 240
One messenger to Sub-Inspector...	— ...	— ...	—	... —
	NORTH-CENTRAL PROVINCE.			
	Under the Director of Irrigation.			
One Irrigation Engineer, Kalawewa ...	Mr. J. A. Balfour ...	Commuted allowance ...	—	... 600
One Irrigation Engineer, Minneri	Mr. G. D. Gordon ...	do. ...	—	... 600
Do. Nachchaduwa ...	Mr. L. C. J. Doxat ...	do. ...	—	... 600
Do. Mahagalkadawala	— ...	do. ...	—	... 600
One Irrigation Inspector, Kalawewa ...	Mr. S. Ramalingam ...	do. ...	—	... 480
One Irrigation Inspector, Minneri	Mr. A. C. Buttery ...	do. ...	—	... 480 [2]
One Irrigation Surveyor, Minneri	Mr. A. E. Byrde ...	do. ...	—	... 360
One Irrigation Sub-Inspector	Mr. R. Gunaratnam ...	do. ...	—	... 360
One Irrigation Assistant Surveyor	Mr. L. Misso ...	do. ...	—	... 240
Do. do. ...	Mr. A. Direckze ...	do. ...	—	... 240
Do. do. ...	Mr. C. A. Leembruggen ...	do. ...	—	... 240
	Under the Government Agent.			
One Chief Irrigation Inspector ...	Mr. F. Booth ...	Commuted allowance ...	—	... 1,200 [2]
Do. do. ...	Mr. C. Kanakasuriyam ...	do. ...	—	... 960
One Irrigation Inspector ...	Mr. M. T. Winslow ...	do. ...	—	... 480
One Irrigation Sub-Inspector ...	Mr. W. Keil ...	do. ...	—	... 360
Do. do. ...	Mr. P. Siriwardene ...	do. ...	—	... 360
Do. do. ...	Mr. S. Dabre ...	do. ...	—	... 360
Do. do. ...	Mr. D. J. Attygalle ...	do. ...	—	... 240
Do. do. ...	Mr. N. Outschoorn ...	do. ...	—	... 240 [2]
One Irrigation Assistant Surveyor	Mr. C. Chellaturai ...	do. ...	—	... 240
Twenty-one Wewa Lekamas ...	— ...	do. ...	—	... 1,050
	NORTH-WESTERN PROVINCE.			
	Under the Director of Irrigation.			
One Irrigation Engineer, Ehetuwewa ...	Mr. L. P. Emerson ...	Commuted allowance ...	—	... 600
One Irrigation Surveyor ...	Mr. H. C. Berwick ...	do. ...	—	... 600
One Irrigation Assistant Surveyor	Mr. H. A. de Vos ...	do. ...	—	... 240
	Under the Government Agent.			
One Chief Irrigation Inspector ...	Mr. A. Goonewardene ...	Commuted allowance ...	—	... 1,200
One Irrigation Sub-Inspector ...	Mr. S. A. Weeraperuma ...	do. ...	—	... 360
Do. do. ...	Mr. G. Selvadurai ...	do. ...	—	... 360
Do. do. ...	Mr. V. Thalayasingham ...	do. ...	—	... 240
Do. do. ...	Mr. D. Speldewinde ...	do. ...	—	... 240
Do. do. ...	Mr. W. H. Solomons ...	do. ...	—	... 240
Do. do. ...	Mr. C. Schokman ...	do. ...	—	... 240
Eight Katti Kanganies ...	— ...	— ...	—	... 960
House rent, Chilaw District ...	— ...	— ...	—	... —[3]
One Irrigation Clerk for six months	— ...	— ...	—	... —
	PROVINCE OF UVA.			
	Under the Director of Irrigation.			
One Irrigation Engineer, Mackerakatti ...	Mr. J. H. Fraser ...	Commuted allowance	—	... 600
One Assistant Engineer ...	Mr. W. Bowden ...	do. ...	—	... 360
One Irrigation Sub-Inspector ...	Mr. R. E. Dias (on probation)	do. ...	—	... 240
	Under the Government Agent.			
One Irrigation Sub-Inspector ...	Mr. P. B. Weerasinghe ...	Commuted allowance ...	—	... 240
Do. do. ...	(Vacant) ...	do. ...	—	... 500
Two earthwork supervisors ...	— ...	— ...	—	... —
One watcher for Cement Pipe Factory	— ...	— ...	—	... —
		Carried over ...	—	... 38,930

[1] Allowance reduced to Rs. 480 on transfer to the Central Province in March, 1902.
[2] Transferred from the Eastern Province.
[3] Transferred to Construction Vote, 1903.

Ref. No.	Office or Present Duty.	Name.	Nature of Allowance.	Salary. Rs.	Allowance. Rs.
			Brought forward ...	—	... 38,930
		PROVINCE OF SABARAGAMUWA.			
		Under the Director of Irrigation.			
		Nil.			
		Under the Government Agent.			
	One Irrigation Sub-Inspector	... Mr. J. F. Ratnayeke	... Commuted allowance ...	—	... 360
		MISCELLANEOUS.			
	Travelling expenses ...	—	... — ...	—	... 10,000
			Total ...	—	49,290

GENERAL.

107 **Maintenance, 1903** (Vote Rs. 80,000).—Statement of amounts required for maintenance of irrigation works during 1903.

Authorized to submit detailed estimates accordingly for the maintenance of the works shown in the following list :—

Name of Work.	District.		Estimate for 1903. Rs.	c.
NORTHERN PROVINCE.				
Kanakarayankulam ...	Government Agent, N. P.,	Vavuniya ...	200	0
Iratperiyakulam ...	do.	do. ...		
Vavuniya ...	do.	do. ...		
Mamadu ...	do.	do. ...	1,200	0
Mandukkoddai ...	do.	do. ...		
Maha Rambaikulam	do.	do. ...		
Vengalachcheddikulam	do.	do. ...	500	0
Periya Olukkulam ...	do.	do. ...		
Sluiced Village Tanks	do.	...	500	0
Periyakulam ...	Director of Irrigation,	Mullaittivu ...	200	0
Kanukkeni Tank ...	do.	do. ...	600	0
Giant's Tank ...	do.	Mannar ...	3,300	0
SOUTHERN PROVINCE.				
Waggalmodara and Timbirimodara Flood Outlet ...	Director of Irrigation,	Galle ...	413	0
Deddúwe Channel ...	do.	do. ...	969	0
Gangaboda Pattu System.				
Hali-ela and 3 miles of Channel ...	Director of Irrigation,	Matara ...		
Urapola Anicut and Channel ...	do.	do. ...		
Sapugoda and Head Sluices ...	do.	do. ...	3,860	0
Elawa Anicut and Channels, 2½ miles	do.	do. ...		
Homeragoda Channel ...	do.	do. ...		
Pettera Anicut and Channel ...	do.	do. ...		
Dandeniya Tank and Channel ...	do.	do. ...	850	0
Denegama-Weangwewa ...	do.	do. ...	781	0
Kekenadura Tank and Channel ...	do.	do. ...	1,000	0
Urubokka Dam ...	do.	do. ...	850	0
Udukiriwila Tank and Channels ...	do.	Hambantota ...	1,440	0
Kirama System.				
Elpitiya Anicut and Arachchi Amuna	Director of Irrigation,	Galle ...	1,260	0
Kirindi-oya Scheme (Tissa) ...	do.	Hambantota ...	2,550	0
Walawe-ganga Works ...	do.	do. ...	4,620	0
EASTERN PROVINCE.				
Hakgalawewa ...	Government Agent, E. P.,	Batticaloa ...	33	0
Maha-oya Tank ...	do.	do. ...	114	0
Pullumalai Tank ...	Director of Irrigation,	do. ...	120	0
Rugama Tank ...	do.	do. ...	1,000	0
Kadukkamunai Tank	do.	do. ...		
Manalpiddi-aru Anicut	do.	do. ...	1,172	0
Pulukunavi Tank ...	do.	do. ...		
Divulana Tank ...	do.	do. ...	1,119	0
Tumpankeni Tank ...	do.	do. ...		
Chadayantalavai Tank	do.	Kalmunai ...	900	0
Viragoda Tank ...	do.	do. ...		
Naulla Tank, Panama Tank, Rotawewa Tank, Lahugalla Tank — Panama pattu works	do.	do. ...	1,760	0
Pattipolai-aru Scheme (Amparai, Irakkamam, and Anicuts) ...	do.	do. ...	3,535	0
Sakamam Works ...	do.	do. ...	1,345	0
Ilakkantai Tank ...	do.	Trincomalee ...		
Allai Tank ...	do.	do. ...	1,320	0
Peruveli Tank ...	do.	do. ...		
Andankulam ...	do.	do. ...	1,030	0
Periyakulam ...	do.	do. ...		
Kantalay ...	do.	do. ...	1,050	0
		Carried over ...	39,591	0

Name of Work.	District.		Estimate for 1903. Rs.	c.
		Brought forward ...	39,591	0
WESTERN PROVINCE.				
Polgaha Tank ...	Government Agent, W. P., Colombo ...			
Kadurugaha Tank ...	do.	do. ...	200	0
Dikmaga Ihala Tank ...	do.	do. ...		
Dikmaga Pahala Tank ...	do.	do. ...		
Attidiya Sluice	do.	do. ...	33	0
Nikatu-ela Sluice	do.	do. ...	136	0
Padukada Dam and Boralesgomuwa	do.	do. ...	50	0
CENTRAL PROVINCE.				
Ma-ela	Government Agent, C. P., Kandy ...		400	0
Waduwan-ela	do.	Nuwara Eliya	400	0
Bodi-ela	do.	do. ...	400	0
Lamasuriyagama-ela and Guardian's Bungalow	do.	do. ...	350	0
Barrack Plain Reservoir ...	Government Agent, C. P.,	Nuwara Eliya	25	0
Karawilahena Tank ...	do.	Matale ...	50	0
Nadeniya Amuna	do.	do. ...	20	0
Elahera Head Sluice ...	do.	do. ...	25	0
Village Tank Sluice ...	do.	do. ...	250	0
Village labour supervision ...	do.	do. ...	375	0
Bowatenna Channel ...	do.	do. ...	120	0
Wiragahapellessa	do.	do. ...	10	0
Dambulla Tank	do.	do. ...	—	[1]
Eraulla Tank	do.	do. ...	35	0
Nicol-oya Upper Ela ...	do.	do. ...	25	0
Kurukulayage Amuna ...	do.	do. ...	50	0
Pelwehera Tank	do.	do. ...	50	0
NORTH-CENTRAL PROVINCE.				
Talawe-ela Anicut ...	Govt. Agent, N.C.P.,	Anuradhapura ...	200	0
Village Tanks	do.	do. ...	3,000	0
Five Irrigation Bungalows ...	do.	do. ...	250	0
Kalawewa and Balaluwewa Tanks and Channels, Kalawewa Yoda-ela, and Maha Illuppallama ...	Director of Irrigation,	do. ...	10,550	0
Tissawewa Irrigation Works ...	do.	do. ...		
Bassawakulam Irrigation Works ...	do.	do. ...	7,795	0
Nuwarawewa Irrigation Works ...	do.	do. ...		
Channels under Nuwarawewa ...	do.	do. ...		
Minneri	do.	do. ...	600	0
Maha Madawachchiya ...	do.	do. ...	180	0
NORTH-WESTERN PROVINCE.				
Paragoda Anicut	Government Agent, N.W. P.,	Kurunegala	35	0
Meddeketiya Tank ...	do.	do. ...	300	0
Magallawewa	do.	do. ...	1,100	0
Maha Uswewa Tank ...	do.	Puttalam	660	0
Tinapitiya Tank	do.	Chilaw ...	470	0
Sluiced Village Tanks ...	do.	do. ...	1,000	0
One Irrigation Bungalow ...	do.	...	160	0
Kurunegala Tank Sluice and Channel	Director of Irrigation,	Kurunegala ...		
Wenoruwewa Tank ...	do.	do. ...	1,750	0
Bu-ela Anicut	do.	do. ...		
Kospotu-oya Anicut ...	do.	do. ...	80	0
Mediyawe Tank	do.	do. ...	858	0
Galgomuwa Tank	do.	do. ...		
Deduru-oya Channels ...	do.	do. ...	4,775	0
PROVINCE OF UVA.				
Horaborawewa and Kudawewa Tanks	Government Agent, Uva ...		520	0
Sudupanawila Anicut, pay of Guardian	do.	...	180	0
Hambegamuwa Tank, pay of Guardian	do.	...		
Okkampitiya-Yodi-ela (Kumbukkan-oya Works)	do.	...	1,988	0
Gal-oya Anicut, pay of cooly ...	do.	...	120	0
Pay of two earthwork Overseers ...	do.	...	720	0 [2]
PROVINCE OF SABARAGAMUWA.				
Kolonna Korale Irrigation Works ...	Government Agent, Sabaragamuwa ...		1,500	0
Batugedara Irrigation Works ...	do.	do. ...	260	0
Openake Aqueduct ...	do.	do. ...	20	0
Kinchigune Anicut ...	do.	do. ...	180	0
Mulgama Tank	do.	do. ...	50	0
Malwatta Irrigation Works ...	do.	do. ...	165	0
Uggalkaltota Irrigation Works ...	do.	do. ...	500	0
Rakwana-ganga Irrigation Works ...	do.	do. ...	500	0
Three Irrigation Bungalows ...	do.	do. ...	360	0
Tunkame Irrigation Bungalow and Works	do.	do. ...	65	50 [3]
		Total ...	83,486	50

[1] Dambulla tank is not used for irrigation purposes. The usual maintenance is therefore omitted.
[2] Transferred from the vote for Salaries and Allowances, as this is a legitimate charge on maintenance.
[3] Reduced from Rs. 120 by order of Government (*vide* Colonial Secretary's letter No. 177 of September 29, 1902).

Ref. No.

119 **Employment of Storekeepers on Works.**—Memorandum dated 13th September, 1902, from the Director of Irrigation, stating that the Irrigation Engineer, Anuradhapura, finds it necessary to employ a storekeeper to take charge of and to issue stores at his works, and to keep the store books, and to assist generally in the clerical work. It appears probable that on some of the other large works which are now in course of construction storekeepers may also be required. As no provision has in the past been made in the estimates for work for the payment of storekeepers, requests authority of the Central Irrigation Board to employ a storekeeper on any work where, in the opinion of the Director of Irrigation, it is necessary to do so; the pay of the storekeepers will be met out of the item for contingencies on the estimates for the works on which they are employed.

Authority granted.

127 **New Appointments.**—Memorandum dated 25th September, 1902, from the Director of Irrigation, stating that there are at present vacancies for five Irrigation Sub-Inspectors and five Assistant Irrigation Surveyors in the Department, and that he has appointed Messrs. Jayawickreme and Schokman, both of whom have passed the Surveyor-General's examination, to be Irrigation Sub-Inspectors, and has also temporarily appointed Mr. Dias an Irrigation Sub-Inspector.

Has sent Mr. Jayawickreme to assist Mr. Bradley, Irrigation Engineer, in the survey of Akattimurippu tank, Northern Province, and Mr. Dias to act as Irrigation Sub-Inspector at Badulla in charge of the repairs to the Alut-ela, and Mr. Schokman (lately overseer in charge of work at Meddeketiya, North-Western Province) to take charge of the repairs at Tebbowa, also in the North-Western Province.

He has also appointed Mr. Leembruggen, who has passed the Surveyor-General's examination, and who has been employed as a draughtsman in the Head Office at Colombo, to be an Assistant Irrigation Surveyor, and has sent him to assist Mr. Doxat, Irrigation Engineer, in the survey of Mahakanadarawa tank, North-Central Province.

Approved, and authority of Government applied for.

Sanctioned by Government, 20th November, 1902.

128 **Promotions** (Irrigation Surveyors).—Memorandum dated 25th September, 1902, from the Director of Irrigation, stating that Mr. A. E. Byrde was appointed Irrigation Surveyor at Rs. 100 per mensem on probation for six months, the full salary sanctioned available being Rs. 150. Mr. Byrde is a practised surveyor and has worked satisfactorily, and he recommends his receiving the full pay of the appointment from the 1st proximo. Mr. O. D. Werkmeister, Head Overseer, Public Works Department, on Rs. 1,000 per annum, seconded for service in the Irrigation Department, has worked well at Giant's tank, and is now well known to the kanganies who have supplied the labour there.

Proposes sending him to Karachchi with Mr. N. M. Walker and as many of the Giant's tank coolies as will go there, and appointing him an Irrigation Surveyor on Rs. 1,200 per annum, there being three vacancies.

Approved, and authority of Government applied for.

Sanctioned by Colonial Secretary's letter of 5th November, 1902.

131 **Proceedings of the Central Irrigation Board,** 1st July to 30th September, 1902.

Approved, and sent to be printed.

133 **Draughtsmen employed in the Head Office.**—The Director of Irrigation submits a list of the amounts of salaries drawn by the draughtsmen employed temporarily in the office of the Director of Irrigation during the quarter ended 30th September, 1902, on estimate No. 202 of 1901.

150/92 **Instruments and Drawing Materials.**—Memorandum dated 9th December, 1902, from the Director of Irrigation, submitting an estimate for Rs. 585·44 for the purchase of instruments and drawing materials for use during 1903.

Sanctioned.

ESTIMATES.

The following estimates submitted by the Government Agents and the Director of Irrigation have received the sanction of the Central Irrigation Board:—

	Amount. Rs. c.	Remarks.
Northern Province.		
126 **Giant's tank,** for the completion of the Giant's tank works	7,654 64 ...	Apportionment, 1902
Southern Province.		
146 **Kekanadura tank,** for urgent repairs to the sluices of the Kekanadura tank	176 0 ...	Apportionment, 1902
Central Province.		
132 **Irrigation channel** on Ulapane railway approach road, for repairs to irrigation ela at Ulapane station road	75 0 ...	Apportionment, 1902
North-Central Province.		
138 **Epolagama bungalow,** for building stable, cattle shed, and cart shed	70 0 ...	Apportionment, 1902
142 **Transport of cement concrete pipes** in Hurulupalata and Kalagampalata	1,830 0 ...	do.
149 **Irrigation bungalow** at Kekirawa, for erecting a new set of outhouses	97 0 ...	do.
157 **Printing, &c., irrigation forms,** for printing certain registers for the use of the village tank staff ...	45 0 ...	do.
158 **Channel to Mr. Sampander's land** under Nuwarawewa, for constructing a distribution gate	23 45 ...	do.
1/03 **Muwa Etagama,** for the completion of repairs ...	22 68 ...	do.

Ref. No.		Amount. Rs. c.		Remarks.
	North-Western Province.			
148	**Deduru-oya channels**, for maintenance (supplementary)	214 28	...	Apportionment, 1902
152	**Sluicing village tanks**, for manufacturing cement concrete pipes for sluicing 182 village tanks in Kurunegala and Chilaw Districts	3,345 0	...	do.
135	**Sluicing village tanks**, for the transport of cement concrete pipes for sluicing 77 village tanks in Kurunegala and Chilaw Districts	2,092 0	...	do.
	Sluicing village tanks, for transport of cement concrete pipes for sluicing 105 village tanks, Kurunegala District	2,600 0	...	do.
136	**Tinipitiya tank**, for repairing the sluice and Kalingula spill	269 0	...	do.
138	**For sinking a well** near Guardian's bungalow, Kurunegala	130 0	...	do.
	Province of Uva.			
141	**Etimolawewa**, for the survey of Etimolawewa ...	1,500 0	...	do.
143	**Irrigation Sub-Inspector's quarters, Bibile**, for repairs	69 7	...	do.
151	**Sudupanawila anicut**, for repairs ...	110 82	...	do.
156	**Alut-ela**, for repairs (supplementary) ...	1,100 0	...	The estimate since amended to Rs. 1,500
	General.			
129	**Tents**, for the purchase of two tents for the Irrigation Department	330 0	...	Apportionment, 1902
58	**House rent**, for the payment of house rent for one Irrigation Inspector and six Sub-Inspectors during 1902	576 0	...	do.
153	**Temporary offices** for the Irrigation Department, for the erecting of (supplementary)	115 0	...	do.
155	**Travelling allowance**, for travelling expenses to irrigation officers (supplementary)	500 0	...	do.
	For the payment of return passage to England of two Irrigation Engineers	1,200 0	...	do.
	For paying special allowance to Mr. Bowden, Assistant Engineer	495 0	...	do.
	For paying special allowance, Messrs. G. D. Gordon and G. J. O'Brien, Irrigation Engineers ...	165 0	...	do.
	For office contingencies, 1902 (supplementary)	45 0	...	do.
	Instruments, for the purchase of instruments for use of the Irrigation Department	909 27	...	do.

MODE OF REPAYMENT, OR CONDITIONS.

a.—Repayment to be made in annual instalments.
b.—Rate in perpetuity for interest and upkeep in lieu of repayment.
c.—Gratuitous. No payment to be made in respect of this expenditure.

WEST RIDGEWAY,
President.

APPENDIX B.

PROVINCIAL REPORTS

ON

THE MINOR IRRIGATION WORKS, 1902.

THE following extracts from the reports of the several Government Agents refer to the minor and village works in their charge.

NORTHERN PROVINCE.

Extract from the Report of the Chief Irrigation Inspector.

A statement of work done in each district :—

Particulars.	Jaffna.	Mannar.	Mullaittivu.
	Cubes.	Cubes.	Cubes.
Annual earthwork	638	6,516⅞	6,392½
Extra labour in repairs to breach	—	180	277
Total Earthwork done	638	6,696⅞	6,669½
	Days.	Days.	Days.
Earthwork	1,276	13,393¾	13,339
Bund and spill clearing	296	525	6,015
Turfing	194	190	1,617
Total Days done ...	1,766	14,108¾	20,971
	Cubes.	Cubes.	Cubes.
Earthwork on account annual and extraordinary works ...	638	6,696⅞	6,669½
Earthwork on account of fine money	603½	—	2,570½
Total Earthwork done ...	1,241½	6,696⅞	9,240

Work was called out in 507 tanks, as against 501 in 1901, as follows :—

	No. of Working Tanks. 1901.	1902.
Jaffna	32	32
Mannar	179	178
Mullaittivu	290	297
Total ...	501	507

Breaches.—I am glad to be able to report that no serious breaches occurred during the heavy rains we had last year. The working tanks that breached, ten in number, were filled in by the villagers at once, as the breaches were small ones. This is satisfactory, as it shows that the villagers are beginning, after plenty of nagging, to realize the importance of keeping their wan* open.

Cement Pipe Sluices.—Sixteen cement pipe sluices were fixed during the year 1902, two in the Mullaittivu District and fourteen in the Mannar District.

The following pipes were made in the Vavuniya factory :—

	6-in. Set.	9-in. Set.
Horizontal pipes	760	96
Vertical pipes	380	30
Angle pipes	6	—

A supplementary estimate has been submitted for completing the work. The junction blocks and a few more pipes are all that is required.

E. R. MACDONNELL,
Chief Irrigation Inspector, Northern Province.

Vavuniya, February 4, 1903.

* "Wan" means "spills."

SOUTHERN PROVINCE.

Extract from the Report of Government Agent.

ON the collection of irrigation rates due from lands under Waggalmodara and Dedduwa, the Government Agent says: The following statement indicates the progress made during the year under review :—

Name of Work.	Amount recovered up to December 31, 1900. Rs. c.	Amount recovered up to December 31, 1901. Rs. c.	Amount recovered up to December 31, 1902. Rs. c.
Waggalmodara ...	1,561 31	1,713 20	2,426 37
Dedduwa ...	5,072 60	7,185 36	12,927 3

* * * * *

Mr. Van Houten was appointed Sub-Inspector of Irrigation for the Galle and Matara Districts His work lies chiefly in the Matara District, where there are 126 village works.

In the Hambantota District the village works are in the charge of Mr. Ferguson, Chief Inspector. The number of village tanks is 632, of which 457 are situated in the West Giruwa pattu, 127 in the East Giruwa pattu, and 48 in the Magam pattu. The work done on them consisted of 9,557 cubes of earthwork and 27,713 square yards (about 5¾ acres) of bund clearing. Sluices should be provided for some of the larger tanks.

The Kachcheri,
Galle, March 14, 1903.

H. W. BRODHURST,
Government Agent, Southern Province.

EASTERN PROVINCE.

Report of the Government Agent.

Village Tanks.—Of these there are 150 in the Batticaloa District, only one of which exceeds 6 feet head of water; they irrigate some 7,000 acres of land only, as compared with the 47,677 acres irrigated under the large restored irrigation works, with which they are entirely unconnected, depending as they do for their supply of water solely on "munmari" or "vanam" rainfall, and are maintained in order by the villagers themselves under communal rules under Ordinance No. 23 of 1889; they are supplied with cement pipe sluices at cost price whenever applied for by them.

During the year, at the instance of the Director of Irrigation, the village tank staff was reduced* to one Sub-Inspector for the Batticaloa District and one for the Trincomalee District, the services of the Chief Inspector and one Sub-Inspector being transferred to the North-Central Province for more important work in the Department.

The usual returns are appended:—

Statement of Cement Pipes manufactured and issued during 1902.

Description of Pipes.	Balance in hand on January 1, 1902.				Manufactured during 1902.				Issued during 1902.				Balance in hand on December 31, 1902.			
	12-in.	9-in.	6-in.	4-in.	12-in.	9-in.	6-in.	4-in.	12-in.	9-in	6-in.	4-in.	12-in.	9-in.	6-in.	4-in.
Horizontal pipes ...	32	70	127	97	333	242	506	—	147	44	138	2	218	268	495	95
Vertical pipes ...	—	—	37	595	117	90	161	—	61	17	42	13	56	73	156	582
Junction blocks ...	—	—	3	—	13	11	24	—	6	2	6	—	7	9	21	—
Angle pipes ...	—	—	—	—	14	11	23	—	—	—	—	—	—	—	—	—

Return of Work done on Village Tanks, 1902.

Pattus.	No. of Tanks undergoing Restoration.	Earthwork.			No. of Cement Pipe Sluices supplied.			
		Total Quantity required.	Quantity done up to 1901.	Quantity done up to 1902.	12-in.	9-in.	6-in.	4-in.
Batticaloa District.		Cubes.	Cubes.	Cubes.				
Bintenna	2	700	250	100	—	—	1	—
Rugam-Eravur	1	500	75	100	—	—	—	—
Koralai	1	500	75	100	—	—	—	—
Manmunai North	3	600	300	140	1	1	—	—
Manmunai South	4	1,400	50	85	—	—	1	—
Eruvil-Porativu	32	8,275	105	200	1	—	—	—
Karaivaku-Nintavur	25	1,610	175	200	1	—	—	—
Sammanturai	3	1,700	200	150	3	—	—	—
Akkarai	33	11,000	100	180	1	1	—	—
Panama	4	980	200	100	2	—	—	—
Trincomalee District.								
Kaddukkulam West	19	16,290	—	1,013	5	2	11	—
Kaddukkulam East	5	3,125	602	196	1	3	9	—
Koddiar Pattu	10	5,700	—	328	1	2	11	5
	142	52,380	2,132	2,892	16	9	33	5

* Two men being ample to look after 142 tanks.—H.W.

Statement of Expenditure on Repairs, Improvements, &c., on Minor Irrigation Works during 1902.

No. of Estimate.	Date of Sanction.	Service.	Amount of Estimates or Amount available.	Expenditure.	Balance Unexpended.
	1898.		Rs. c.	Rs. c.	Rs c.
187	July 6	For transporting and inserting cement pipe sluices to village tanks, Bintenna	36 50	—	36 50
	1900.				
218	Nov. 26	For transport of pipe sluices to village tanks, Batticaloa and Kalmunai Districts ...	441 16	439 55	1 61
	1901.				
205	Sept. 12	For inserting cement pipe sluices to village tank bunds in Bintenna and Panama pattus ...	96 4	57 94	38 10
210	Sept. 26	For manufacture and transport of cement pipe sluices, Trincomalee District	292 80	289 16	3 64
218	Oct. 16	For manufacture of cement pipe sluices for village tanks in Koralai, Eraur, and Panama pattus ...	2,022 70	2,022 23	0 47
228	Nov. 18	For repairing of old stop plank sluices in Karaivaku pattu	154 27	142 60	11 67
	1902.				
17	Feb. 15	For insertion of three kalingulas for village tanks at Eruvil and Akkarai pattus ...	1,842 0	73 68	1,768 32
96	April 9	For well and fence at Sub-Inspector's quarters at Panama	84 75	19 7	65 68
113	April 23	For addition of wing walls, &c., to old sluices at Karaivaku pattu	273 20	269 90	3 30
121	May 3	For removing the damaged wing wall and constructing another in its place for a kalingula at Makilur Periyakulam, Eruvil pattu ...	80 66	69 72	10 94
123	May 31	For repair of the bungalow at Maha-oya for the quarters of the Sub-Inspector of Bintenna ...	50 0	50 0	—
158	Sept. 26	For manufacturing special vertical pipes for Trincomalee District	175 0	175 0	—
		Total ...	5,549 8	3,608 85	1,940 23

The Kachcheri,
Batticaloa, February 27, 1903.

S. HAUGHTON,
Government Agent, Eastern Province.

WESTERN PROVINCE.

Extract from the Report of the Government Agent.

THE following amounts were apportioned for the maintenance of irrigation works during the year 1902 :—

	Rs. c.
Polgaha tank	200 0
Kadurugaha tank	
Dikmaga Ihala tank	
Dikmaga Pahala tank	
Attidiya sluice	33 0
Nikatu-ela sluice	136 0
Total ...	369 0

2. The amounts expended were as follows :—

	Rs. c.
Polgaha tank	50 0
Kadurugaha tank	60 0
Dikmaga Ihala tank	50 0
Dikmaga Pahala tank	40 0
Attidiya sluice	7 25
Nikatu-ela sluice	104 50
Total ...	311 75

3. The Kesbewa tank was cleared of its weeds, and the branches of the trees round the tank were cut down in April, 1902. The cost of the work (Rs. 99) was paid out of the irrigation fines.

Colombo Kachcheri,
February 23, 1903.

C. A. MURRAY,
Government Agent, Western Province.

CENTRAL PROVINCE.

Extract from the Report of the Government Agent.

THE principal irrigation works in the Kandy District are :—

(1) Amunuwela-amuna in Harispattu.
(2) Wirapitiya-ela in Lower Dumbara.
(3) Udugoda Bandara-ela in Lower Dumbara.
(4) Teldeniya Wahala-ela in Lower Dumbara.
(5) Siyambalagastenna-ela in Lower Dumbara.
(6) Palliyawela-amuna.

No large irrigation work was undertaken in this district during the year. A proposal was made to construct an anicut at Amunuwela at a cost of Rs. 4,893, but the work has been shelved for the present, as the villagers have not yet paid the last instalment due by them for previous works.

Surveys have been undertaken in the case of Amunuwela, Udugoda Bandara-ela, and Siyambalagastenne-ela.

A proposal is under consideration for the improvement and repair of Teldeniya Wahala-ela at a cost of Rs. 706. The cultivators have agreed to pay a rate of 50 cents per acre in perpetuity.

Weerapitiya-ela and Udugoda Bandara-ela were breached during the year, and estimates have been prepared for their repair at a cost of Rs. 767 and Rs. 3,243 respectively.

Kandy Kachcheri,
March 25, 1903.

J. P. LEWIS,
Government Agent, Central Province.

* * * * * *

The Sub-Inspector for the Kandy District reports that there are 57 minor works in that district, and that he inspected them all and made two surveys, and that there are no irrigation rules for the carrying out of the maintenance and repair whereby the headmen and shareholders can be made to do work when it is required.

* * * * * *

The Assistant Government Agent, Nuwara Eliya, reports:—

The Ma-ela, which is the only irrigation work of the district accomplished under the provisions of the Irrigation Ordinance; it is 6 miles long, and benefits a large extent of country, and its further improvement, for which an estimate has been made, is very necessary.

The Waduwawala-ela, 4 miles long, which irrigates the hillsides opposite to the Bodi-ela. This ela is in very bad order, and the cultivators under it refuse to pay for its improvement. The only alternative is a rigorous enforcement of the irrigation rules until the ela is in proper working order.

The Mulahal-ela, 3 miles long, to which the same remarks apply, though perhaps in a less degree.

The Lamasuriyagama-ela, which the villagers are anxious to see extended and improved. They asked for the work eight years ago, and it is now three years since they guaranteed repayment of the cost. The scheme is still "under consideration."

The irrigation headmen are unremunerated, and it is not easy to get satisfactory work out of them.

The irrigation rules are each year being more systematically enforced. There are irrigation channels all over the district kept up under these rules, and many of them would largely benefit by small works of improvement being carried out upon them. The first difficulty is to get the shareholders to consent to pay, the second is to get the money advanced and the work carried out after their consent has been obtained. In two and a half years I have not succeeded in getting a single work carried out.

The year was an unusually wet one, and the water supply was good throughout. Both maha and yala crops were above the average.

E. M. DE C. SHORT,
Assistant Government Agent.

In the Matale District the following extracts from the Irrigation Inspector's report are interesting:—

Earthwork.—The amount of earthwork done on village tanks during 1902 was 10,737 cubes (39,767 cubic yards). Not only was the earth merely put on the bund, but on some tanks the bunds were turfed, gravelled, and fenced in. A great deal of earthwork was done on two new tanks, viz., Moragolla Mahawewa and Talagiriyagama Mahawewa. On the former 1,028 cubes (3,808 cubic yards) were done in two months by the villagers and the two breaches filled. The work on this tank was started on the 15th August, and by the 15th October there were 4 feet of water in the tank. On the latter tank 414 cubes (1,536 cubic yards) were put into the breach, but it was not enough, and it unfortunately gave way by the water overtopping it. Most satisfactory work was done on Naula tank, which is now practically completed.

Tanks.—The number of village tanks on the list is 148. This does not include the two restored by Government, viz., Pelwehera and Karawilahena. With these two the total is 150. Besides the 150 tanks there are 5 amunas and 2½ miles of channel to look after. The amunas are the Elahera head sluice, Bowetenna and channel, Nadeniya, Wiragahapellessa, and Kurukolayaya.

Sluices.—The following tanks were sluiced during the year:—Ilumbakarawila, Kottakittigewewa, Galkotuwewa, Pahalawewa. Cement pipes were also issued to a number of tanks which were short, and all the pipes in stock were used up.

Surveys.—A survey of all the irrigable land under Moragolla Mahawewa was made in July, costing Rs. 28·80. The extent was nearly 90 acres. The Dorawalagala survey was taken in hand, but owing to the wet weather was not completed. Channels were traced under Pelwehera, and an estimate sent in showing the cost of cutting the same.

The headmen, as a rule, did not display much active interest in irrigation, except in the Kandapalla korale, where the Korala proved of great assistance, and not only showed energy himself, but infused considerable energy into the villagers. This accounts in some measure for the small default in his korale.

The fields under every tank almost were cultivated and yielded good crops, especially in Kandapalla korale.

G. HAWKINS,
Irrigation Inspector.

NORTH-CENTRAL PROVINCE.

Extract from the Report of the Government Agent.

Nuwarakalawiya Village Tanks.—There are 1,428 village tanks under supervision in Nuwarakalawiya. In 1901 there were 1,419; the remaining 9 have been added during the year. Of these 1,428 tanks, 580 are in Nuwaragam palata, 464 in Hurulu palata, and 384 in Kalagam palata; 825 are completed or nearly so, 603 are in various stages of restoration.

At the beginning of the year these tanks were in charge of one Chief Irrigation Inspector, one Inspector, and four Sub-Inspectors. The Chief Inspector had general charge of the whole district, the Inspector had the Kalawewa Yoda-ela and some 97 tanks to look after, and each of the Sub-Inspectors had the immediate supervision of an average of rather more than 332 tanks. This did not include minor Crown tanks being restored on permits, which are also in charge of the village tank staff and will be referred to later.

Although a very large quantity of earthwork had been reported to have been done each year, it was found that the number of tanks completely restored did not increase to anything like the extent which might have been expected had the earthwork been properly applied. Many tanks had been under restoration for twenty-eight years or even more, and yet were not complete. Very few tanks, if systematically restored, should require more than ten years for full completion. No doubt this unsatisfactory state of things was due to trying to cover too much ground, and to entrusting each tank officer with a far larger number of tanks than he could look after properly. It was accordingly decided to concentrate the four Sub-Inspectors in one palata, and to make an effort to secure the final completion of all tanks in it which had been under restoration for ten years or upwards and were not yet complete. The Hurulu palata was selected for this purpose, chiefly for two reasons: (1) because there are no railway or large irrigation works going on there, and there is therefore no demand by Public Departments for village labour; and (2) because, being more remote, the supervision there had been less effectual than in other palatas, and the work of restoration was more behind hand. 285 out of the 464 tanks in the palata came under the class which was to be specially dealt with.

Resolutions were passed by the various Village Committees of the palata that the necessary additional earthwork should be performed, and in accordance therewith orders were published, as required by the village rules, specifying the dates on which work was to commence and the quantities to be performed. The bunds were also levelled and pegged out to the proper heights and slopes. These orders met for a time with determined opposition in many of the Sinhalese and all the Moorish villages of Kalpe, Kunchuttu, and Mahapotana korales. This was due mainly to one agitator, who went from village to village inciting the people not to work, and promising to see them safe from any ill-consequences. As it was found that the work did not start at the time ordered, and persuasion having but little effect, prosecutions were entered in the Gansabhawa. Some difficulty was experienced in securing the attendance of the accused, who in many cases disobeyed the summons served on them, but eventually the more prominent offenders were brought up on warrants and fined from Rs. 10 to Rs. 20 each. By this time the reply of Government to a memorial which had been presented against the order calling out labour, that the work must be performed, had been received and published. Then the villagers, particularly the Sinhalese, started work in earnest.

The struggle against the opposition had, however, taken time. It was not until late in July that real work began in the recalcitrant korales, though in the other parts of the palata it had been progressing steadily all along. The work once started was pushed on vigorously until the end of September. From the beginning of October heavy rains set in, filled up the tanks, and rendered all further earthwork for the year impossible. Yet in the two months during which the people really exerted themselves a very large quantity of work was accomplished, as will presently be shown. Had the season for earthwork been as favourable as in previous years, in which the rains did not commence until November, there is no doubt that the object in view could have been nearly, if not quite, achieved. Considering the uphill task which the tank officers had to face and the early rains, their efforts cannot be regarded as wholly unsuccessful.

The work of restoration will be continued during 1903; it is not anticipated that any formidable opposition will be met with. Many of the tanks are so far advanced towards completion that another year's moderate work will probably suffice, while others on which there was from the first a very large quantity to be done may require a second or even a third year.

It will readily be understood how beneficial this work is to the people. It will not only render their tanks safer from the danger of being breached and fitter to perform with regularity their function of irrigating the fields, but it will relieve the villagers once for all from the now annually recurring liability to perform earthwork, and from the constant vexation of being prosecuted if they make default. Last but not least, it will strike at the root of the corruption and extortion which prevail so long as there is earthwork to be performed, and so long as a small gratification to the Velvidane, to the Wewa Lekama, or may be to the Sub-Inspector himself, will secure immunity from prosecution for non-performance, or at least such evidence as will mitigate the punishment. I have held many inquiries into cases of this sort, but have never yet succeeded in bringing home his guilt to the offender. Naturally bribes are given in secret, and there is no acknowledgment. Yet the complainant always brings up a lot of witnesses prepared to depose that they were present, who invariably break down hopelessly under examination.

The quantity of earthwork performed during the year was 112,396 cubes (416,284 cubic yards), which at 25 cents a cubic yard represents a money value of Rs. 104,071. The corresponding quantity for 1901, a much more favourable year for earthwork, was 400,296 cubic yards, or 15,988 cubic yards less than in the year under review.

Of the total quantity performed in 1902, 68,937 cubes (255,324 cubic yards) were done on the bunds of the 285 tanks in Hurulu palata, which were taken up for special restoration, as described above. In other words, nearly two-thirds of the whole work turned out was contributed by the shareholders of 285 tanks, which represent but one-fifth of the total number of tanks under supervision.

The work in Nuwaragam palata was supervised by the Ratemahatmaya, and in Kalagam palata partly by the Irrigation Inspector, who also had the Kalawewa Yoda-ela in his charge, and partly by Mr. Chelladurai, a new Sub-Inspector, whom the Director of Irrigation sent up in July last at my special request. The total quantity of earthwork done under the supervision of these three officers was 39,930 cubes (147,892 cubic yards).

I greatly regret to have to record that Mr. Chelladurai, who was a most promising officer, died in December from pneumonia.

Owing to the shorthandedness of the village tank staff, the progress made in the issue, under the new conditions described in my last report, of permits to restore minor abandoned Crown tanks was not so rapid as I had hoped it might be. Before any permit can issue it is necessary that there should be one report from the Chief Irrigation Inspector as to the nature and capacity of the tank, the acreage which it will benefit, its connection with any other tank or system of tanks, the possibility of its submerging existing fields, and so on, and another report from the Ratemahatmaya as to the nature of the jungle upon the bed of the tank and upon the land under it, the claims (if any) to the land affected, and the names of all those willing and entitled to join in the restoration. It not infrequently happens that there are two or more sets of rival applicants for the permit, whose conflicting interests either have to be reconciled or adjudicated upon after inquiry by the Government Agent. If an application passes the ordeal of these reports and is approved as a promising undertaking, a survey of the bund and a plan of it with longitudinal and cross sections, showing its present condition and the quantity and nature of the work necessary for its restoration, have to be made in order to draw up the specification which the conditions require to be embodied in the permit.

It will be obvious that all these preliminaries involve a good deal of hard work in inspection, inquiry, surveying, and plotting, particularly in view of the long distances which have to be covered in this extensive Province. It was not to be expected that the limited tank staff, with their hands full, as they were, with the work of restoration of the village tanks in Hurulu palata, could devote much special attention to this work. After all, important as the restoration of abandoned Crown tanks is, that of the existing village tanks is even more so, and must take the first place.

As to what has been accomplished in this branch of work, the Chief Irrigation Inspector reports :—

> Of the 212 permits issued to restore abandoned Crown villages in terms of the old Circular, 63 permits have already been cancelled either for neglect or for inability on the part of the permit-holders to comply with the demand of a fixed minimum annual work for completing the work within a reasonable period. The restoration of tanks on three other permits has been stopped, as interfering with the proposed Kahalla forest reserve. Of the remaining 146 permits, permits of three tanks have been re-issued under the new Government Circular.
>
> Of the still remaining 143 permits in force, designs and specifications of four of them have already been submitted for re-issue. The requisite levels have already been taken for design, and specification of 13 other tanks and plans and sections are under preparation. Of the still remaining 126 permits, 69 should be cancelled for neglect. Action for the re-issue of the remaining 57 should now be taken and will receive attention in 1903.
>
> Besides, 51 new applications to restore Crown tanks as per the new Government Circular were received during 1902. Preliminary reports for 20 of them have already been made. Sections for design and specification for four of these have already been taken, and plans are under preparation. The rest are to receive attention in 1903. The delay in their disposal is due to the special work in Hurulu palata and the want of hands to take up the survey portion of the work.

What I have written is more than enough to show what a very large concern the tank system of this Province is, and its enormous importance. So far as the indigenous population is concerned, it is beyond comparison their most vital interest. In order to its due development it was imperatively necessary that the irrigation staff should be materially strengthened. Accordingly, representations were made by me with that object, and with the result, I am happy to say, that the staff has been nearly doubled. I must express my obligations to the Director of Irrigation for supporting my appeal, and to the Central Irrigation Board for recognizing the necessities of the case and sanctioning the additional appointments. A second Chief Irrigation Inspector has now been appointed, and the staff of Assistant Inspectors and Sub-Inspectors has been raised from five to seven. One of the Sub-Inspectors, Mr. Dabre, has been placed in special charge of the distribution of water under Kalawewa and the Yoda-ela under the title of Irrigation Superintendent, thus setting free one more officer for purely village tank work. The vacancy caused by Mr. Chelladurai's death has already been supplied. That caused by Mr. Dabre's appointment will be filled as soon as the Director of Irrigation has at his disposal an officer who can speak Sinhalese.

I thus have, or shortly shall have, at my disposal two Chief Irrigation Inspectors, one Inspector, and six Sub-Inspectors. The Province has been divided into two as nearly as possible equal divisions, called respectively, for want of a better name, the northern and the southern, though north-eastern and south-western would perhaps describe them more accurately.

From the commencement of 1903 each division has been placed in charge of a Chief Irrigation Inspector, each of whom will have three Sub-Inspectors under him. The remaining officer—the Inspector—will be specially detailed for surveys of Crown tanks to be restored on permit. The year 1903 thus starts with much better prospects of progress than any previous year has had. I hope not only to continue the restoration of village tanks in Hurulu palata, but also to take up the same work in Kalagam palata. The Ratemahatmaya and the people of the latter palata are anxious to have their tanks finished off, and there appears to be no likelihood of any serious trouble in getting the work done. Good progress should also be made throughout the Province in the restoration of abandoned Crown tanks.

I should not omit to add that the services of the Irrigation Engineers in the Province, a body of highly qualified men, whose special duty is the investigation and restoration of the larger works which are in charge of the Irrigation Department, have always been available in any matter requiring special professional skill.

There has been one instance—the village tank of Elapatwewa in Matombuwa korale—in which extra work done over and above the normal annual quantity has been rewarded by payment in land under section 14 of Government Circular No. 59 of 5th June, 1901. A provisional grant of 10 acres has been allowed. In another case—Karambewa in Ullagala korale—a similar grant is under consideration.

The following communications between tanks have been opened up during the year :—

(*a*) Kuda Kekirawa in Kalagam korale with Maha Kekirawa in Maminiya korale.
(*b*) Palugaswewa with Marasin Hammillewa in Kiralowa korale.
(*c*) Andiyagala with Gambirisgaswewa in Kiralowa korale.

The number of similar connections which might be made is very large, but it is almost impossible to give this important means of improving water supply the special attention which it deserves until the tank restoration now being pushed forward is more advanced. One must restrain one's impatience to see everything made perfect all at once. A sum of Rs. 1,017 was expended out of the Tank Fine Fund and Rs. 36 out of the Yoda-ela Fine Fund on repairs and improvements. The Chief Irrigation Inspector states that he had made arrangements to spend a much larger amount, but that the early rains prevented it.

The masonry spill of Relapanawa tank in Kalpe korale, which was in a ruined condition, was pulled down and rebuilt under the supervision of Mr. Doxat, Irrigation Engineer. The same officer effected radical repairs to the masonry stop-wall, sluice, and spill of Muwa Etagama tank in Kadawat korale. The greater part of the old work was pulled up and replaced partly by cement concrete and partly by masonry in cement. The construction of a new sluice at Maha Diwulwewa tank in Kadawat korale, to replace the old one which had collapsed, was commenced, but work was interrupted by the rains.

The culvert on the Mannar road at the 49th milepost, constructed for the purpose of carrying water across the road to irrigable land on the other side of it, and the repairs and improvements to Ipalogama bungalow were completed under the supervision of the Chief Irrigation Inspector. The votes for maintenance of village tank sluices of Talawa-ela anicut and of irrigation bungalows were expended. The building of stables and other additions to the irrigation bungalows at Ulukkulama, Kekirawa, and Ipologama will be undertaken in 1903.

Proposals for repairs to the spill of Kokkabe tank in Mahapotana korale and for the improvement of the sluice of Tirapankadawela in Kalpe korale were submitted, and estimates have been called for. Proposals for the rebuilding of the spill of Hiriwadunna tank and for repairs to the sluice of Palugaswewa, both in Matombuwa korale, and for a new spill for Kele Hammillewa in Kiralowa korale are under consideration. The questions of improving the spill of Mahamankadawala in Nuwaragam korale and of providing a spill for Ihalakanbindigama in Uddiyankulam korale are receiving attention. The proposal for rebuilding the sluice of Galmaduwa tank in Eppawala korale, which was breached in 1901, was not approved by the Director of Irrigation, who has decided that a cement pipe sluice will suffice. These are only instances of many others of a similar nature which are constantly coming up for disposal.

The manufacture of cement concrete pipe sluices for village tanks was carried on in the factory at Anuradhapura under the supervision of the Chief Irrigation Inspector. There are in all 257 tanks to be sluiced. He reports that the manufacture will be completed in February. Sets of pipes and junction blocks for 128 out of the 257 tanks were transported on estimate No. 131 of 25th June, which provided for the transport of pipes for 148 tanks. The transport of the pipes for the remaining 20 tanks has been delayed owing to the heavy rains, which rendered cart traffic on village roads impossible. None of the pipe sluices so transported have yet been inserted, owing to the same early rains which filled the tanks. An estimate for the transport of the pipes for the remaining 109 tanks was sanctioned in November, but for the reasons already given no transport could then be effected. The pipe sluices for the whole 257 tanks will be transported and inserted during 1903.

A statement showing the cement concrete pipes in stock on January 1, 1902, manufactured during the year, number issued, and balance in stock at the end of the year, is annexed :—

Statement of Cement Concrete Pipes available at the Pipe Yard, Anuradhapura, at the end of December, 1902.

Particulars.	4-Inch.			6-Inch.			9-Inch.			12-Inch.			Cylindricals.	Bent Pipes.
	J. B.	2-ft.	1-ft.	J. B.	2-ft.	1-ft.	J. B.	2-ft.	1-ft.	J. B.	2-ft.	1-ft.		
Balance in stock on January 1, 1902 ...	65	1555	577	29	448	280	12	349	348	5	48	94	29	21
Removed from Public Works Department Yard, Anuradhapura	—	—	—	—	—	—	—	—	—	—	5	—	—	—
Made during the year on Estimate No. 26 of March 21, 1901	100	2731	955	50	1556	475	—	—	—	—	—	—	—	—
Total ...	165	4286	1552	79	2004	755	12	349	348	5	53	94	29	21
Issued during the year	97	2338	873	32	847	326	1	39	32	—	20	—	—	—
Balance in hand at the yard at the end of the year	68	1948	659	47	1157	429	11	310	316	5	33	94	29	21

Owing to the very heavy rains no less than 64 village tanks breached. These nearly all occurred during the first half of December. On the 9th of that month a fall of 5·70 inches was recorded in Anuradhapura, and was at least as heavy in most other parts of the Province. This, coming after a fall of 23 inches in October and 17 inches in November, when the ground was thoroughly saturated and the tanks were already full, had the effect of overtopping the bunds of many tanks, with a breach as the inevitable result. Forty-eight of the breaches are to be attributed to this cause. In some cases the catastrophe was accelerated by the breach of an upper tank. Thirty-two of these cases were tanks not fully restored; 11 were new tanks. In 10 other cases the villagers, seeing that their bunds must be overtopped, cut gaps at the "wana," or spill ends, to avert more serious damage to the central portions of the bunds. Six cases are attributed to leaks. One of the most serious—that of Maha Kekirawa, a large village tank—was due to this cause, rotten roots having been left buried in the

bund. In almost all cases cofferdams have been put up across the breaches, and sufficient water for the coming harvest has been retained.

Tamankaduwa.—There were 52 village tanks and 6 small Crown tanks under restoration by the villagers during the year. The number of village tanks is the same as in 1901, but that of the Crown tanks is one less, one having been abandoned during the year. All are in a more or less advanced stage of efficiency, but none are yet fully restored. Forty-four of these are sluiced, and three of them have two sluices each. These tanks have been in charge of the Revenue Officer during the year, subject to the orders of the Government Agent.

Earthwork is performed annually on all of them, and their bunds and spills are kept clear of jungle. The quantity of earthwork done during 1902 was 18,672 cubic yards, or 888 cubic yards more than in 1901. There is a default of 3,816 cubic yards, but the Revenue Officer expects that this will be made good. These tanks were all full at the end of the year. The prospects for next year's harvests are favourable. One tank breached; the water rose in one night and overtopped the bund.

L. W. BOOTH,
Government Agent, North-Central Province.

The Kachcheri,
Anuradhapura, February 26, 1903.

NORTH-WESTERN PROVINCE.

THE following extracts are taken from the report of the Chief Irrigation Inspector :—

The completion of village tanks is greatly retarded in consequence of a few landowners refusing or failing to carry out the earthwork apportioned to them. Such defaulters have been repeatedly prosecuted and fines imposed on them. Even this punishment has not had a deterrent effect, for some of their work yet remains unfinished.

It is a moot point whether the work in default can be done departmentally, and the cost thereof recovered by sale of the lands liable for such arrears.

The following statement shows the quantity of earthwork contributed by landowners on their tanks during the year :—

			Cubes.
1	...	Wanni Hatpattu	1,000
2	...	Dewamedi Hatpattu	55,223
3	...	Katugampola Hatpattu	7,526
4	...	Weudawili Hatpattu	Nil
5	...	Hiriyala Hatpattu	13,533
6	...	Demala Hatpattu, Puttalam District	9,511
7	...	Chilaw District	24,043
		Total ...	110,836

Maintenance of completed Tanks.—It is time that arrangements were made for the proper maintenance and upkeep of the village tanks which have been completed in the Province. For this purpose I would suggest the division of the Province into four or five irrigation districts, not following the existing revenue divisions, but having in view the equalization, as much as possible, of the number of tanks to be put in charge of each officer.

Many of the tanks completed are fast reverting to their former condition for want of proper and intelligent supervision and maintenance. This matter requires early attention and decision.

The Vel-vidanes (irrigation headmen) ought to be made to devote more of their time to the work of maintaining irrigation works, which is a part of their legitimate duties. At the request of the Government Agent I have framed rules for the guidance of these headmen, and have submitted them for his approval.

Tanks breached.—Considering the heavy rainfall of the year, it is satisfactory to know that only 12 tanks out of 1,335 are reported to have breached. Nine of them have already been repaired.

Pipe Sluices.—Fifty-eight tanks were supplied with concrete pipe sluices, a list of which is annexed. I subjoin a statement showing the total number of village tanks in the Province in my charge, the number completed up to date, and the number remaining to be completed :—

Districts.	Total Number of Working Tanks.	Number of Tanks completed in 1902.	Number of Tanks completed in previous Year.	Number remaining to be completed.	Number completed up to date.
Wanni Hatpattu	558	6	541	11	547
Dewamedi Hatpattu ...	254	7	232	15	239
Katugampola Hatpattu ...	141	—	—	141*	—
Weudawili Hatpattu ...	12	1	9	2*	10
Hiriyala Hatpattu	150	8	50	92*	58
Demala Hatpattu	109	10	84	15	94
Chilaw District	111	8	5	98	13
Total ...	1,335	40	921	374	961

* All to be completed in 1903.

Statement of the Manufacture and Distribution of Cement Concrete Pipes during the Year 1902.

Particulars.	12-in. 2-ft. Pipes.	12-in. 1-ft. pipes.	9-in. Junction Blocks.	9-in. 2-ft. Pipes.	9-in. 1-ft. Pipes.	6-in. Junction Blocks.	6-in. 2-ft. Pipes.	6-in. 1-ft. Pipes.	4-in. Junction Blocks.	4-in. 2-ft. Pipes.	4-in. 1-ft. Pipes.
Balance in stock on 1st January, 1903	22	104	3	596	4	12	320	241	6	263	88
Made during the year ...	—	—	23	140	237	116	3,777	1,406	16	196	53
Total ...	22	104	26	736	241	128	4,097	1,647	22	459	141
Pipes transported to tanks during the year	—	—	19	544	189	87	2,063	1,438	20	448	138
Balance in stock on 1st January, 1903	22	104	7	192	52	41	2,034	209	2	11	3

March 6, 1903.

ABRAM GOONEWARDENE,
Chief Irrigation Inspector.

PROVINCE OF UVA.

Extract from the Report of the Government Agent.

Village Tanks.—The systematic restoration of village tanks in Lower Uva was continued, and a fair amount of work was done on 32 of these tanks, namely, 16 in Wellassa, 1 in Buttala, 1 in Bintenna, and 14 in Wellawaya. Details are specified below, which give particulars of all village tanks, the restoration of which dates from 1898 :—

Division.	Name of Tank.	Date when Restoration commenced.	Date when sluiced.	Date when completed.	Quantities (in Cubes) of Earth-work done in 1902.
Wellassa ...	Molandeniya	1900	1901	1902	25
Do. ...	Ambagolla	1899	1900	1901	10
Do. ...	Radaliyadda	1898	1900	—	—
Do. ...	Mellagama	1898	1899	—	10
Do. ...	Kolonlanda	1898	1902	—	2
Do. ...	Puwakarawa	1899	1900	1902	232
Do. ...	Uda-arawa	1899	1900	—	99
Do. ...	Bendiyawa	1899	1900	—	72
Do. ...	Dunumewa	1898	1899	1902	15
Do. ...	Udalindapitiya	1899	1901	—	120
Do. ...	Puwakgaha-arawa	1898	1900	—	98
Do. ...	Rattanadeniya	1898	1900	—	—
Do. ...	Usgamayawa	1898	1900	—	13
Do. ...	Kohilawewa	1898	1900	1902	125
Do. ...	Asweddumewewa (Galbokka) ...	1900	—	—	8
Do. ...	Asweddumewewa (Magandena) ...	1900	1902	—	100
Do. ...	Migahawewa	1898	1900	—	20
Do. ...	Kossearawa	1900	—	—	—
Do. ...	Polgahagama	1898	—	—	5
Buttala ...	Wattegamawewa	1898	—	—	30
Bintenna ...	Hebarawa	1902	—	—	37
Wellawaya ...	Sittarama	1901	—	—	142
Do. ...	Pahalapewwewa	1902	—	—	12
Do. ...	Tanamalwila	1900	—	—	38
Do. ...	Komaligama	1902	—	—	50
Do. ...	Bodagama	1900	—	—	98
Do. ...	Migaswewa	1900	—	—	52
Do. ...	Nikawewa	1900	—	—	54
Do. ...	Kudawewa	1902	—	—	25
Do. ...	Kaladelgala	1900	—	—	20
Do. ...	Suriya-aar	1900	—	—	25
Do. ...	Niyadagala	1900	—	—	8
Do. ...	Nemeda	1901	—	—	30
Do. ...	Mudadigampelessa	1901	—	—	12
Do. ...	Udapewwewa	1902	—	—	18

Crown (abandoned) Tanks.—In Bintenna two of these tanks were selected for restoration under the special conditions authorized by Government, namely, Siyambalakotapelessewewa and Viharegodawewa. On the former 46 villagers agreed to work, the clearing of the bund and spills was

completed, and a certain amount of earthwork was done. On the latter 19 villagers agreed to work, the clearing of the bund and spills was completed, and a survey was undertaken of the irrigable lands to be benefited. In the other divisions of Lower Uva the restoration of Crown (abandoned) tanks under these special conditions was not undertaken, since the people were already occupied with the repair of their own tanks, as indicated in the preceding paragraph.

Etimolewewa.—In the division of Buttala at Etimole there are traces of a large irrigation work, which may on further investigation prove to be worth restoring. The approximate area of the tank bed is 2,880 acres, the length of the bund is about 2,500 feet, and the head of water at present spill level when restored will be (say) 21 feet. The catchment area is over 5,000 acres, and the extent of land irrigable is about 9,000 acres. Further details, together with a sketch of the locality, have been furnished to the Director of Irrigation, accompanied by a suggestion that a survey should be undertaken, and that the scheme should be investigated with a view to its being made a Government work. Labour is available within reach, and it will be possible to dispose of all land capable of being asweddumized.

Accounts.—The total expenditure during the year was Rs. 12,878·60, namely, Rs. 752·58 on works of construction, Rs. 5,952·89 repairs, and Rs. 3,040·72 maintenance, all of which is recoverable. The cost of the staff amounted to Rs. 3,132·41. The recoveries during the year amounted to Rs. 2,700·26.

Badulla Kachcheri,
February 24, 1903.

F. H. PRICE,
Government Agent, Uva.

PROVINCE OF SABARAGAMUWA.

Extract from the Report of the Government Agent.

MR. Henman visited and reported on all the irrigation works, on some of which masonry works is required. On the Kaltota channel a good deal of scour had occurred, both near the intake and on the recently built trough. This has been put in order. The cultivators under Uggalkaltota passed a set of rules arranging for systematic cultivation of the various ranges, instead of their old practice of cultivating the whole range at one time and so running short of water. I have also asked to have the boundaries of the lots defined, as people are now overstepping their boundaries in various places, having nothing to guide them. The work done here is very considerable and encouraging.

I wish I could say the same of the Kolonna korale works, which make but little advance. The people have plenty of chena, and it is a matter of regret that the Ratemahatmaya has hitherto failed to increase the field cultivation to any appreciable extent. Under Hingurawewa the land claim is not yet settled, but I hope to settle this soon.

The land under the Malwatta is fully cultivated, but under the Rakwana-ganga scheme no start has been made. The land has been sold under the first 3 miles, but is not yet cleared. A breach near the intake requires attention.

The system of paying coolies to clear the elas of silt is a difficult one to work. It is hard to get the men to do what they ought. It would be better if such work were handed over to the cultivators under their own rules, but as they pay a rate it is perhaps difficult to get them to take over such work now.

Ratnapura Kachcheri,
March 2, 1903.

G. S. SAXTON,
Government Agent, Sabaragamuwa.

APPENDIX C.

LIST OF THE IRRIGATION DEPARTMENT STAFF, CEYLON.

Service corrected up to December 31, 1902.

	Station.	Salary.	Allowance.	Date of First Appointment under Government.	Date of Appointment to Present Rank.
HEADQUARTERS, COLOMBO.		Rs.	Rs.		
H. T. S. Ward, Director of Irrigation ...	Colombo	12,000	420*	May 21, 1876	May 15, 1900
H. Parker, Irrigation Assistant (on leave)...	do.	10,000†	—	June 22, 1873	Jan. 1, 1902
F. J. Tothill, Secretary, Central Irrigation Board, and Office Assistant ...	do.	2,400	—	Oct. 27, 1898	Jan. 1, 1902
IRRIGATION ENGINEERS.					
G. J. O'Brien ...	Vakaneri, E. P.	4,000	600	Sept. 26, 1899	Jan. 1, 1901
N. M. Walker ...	Iranaimadu, N. P.	4,000	600	May 20, 1890	July 27, 1900
M. Sanmukam (seconded from Public Works Department) ...	Kariukkeni, N. P.	2,500	360	Dec. 11, 1886	Aug. 5, 1900
R. S. Llewellin ...	Hambantota, S. P.	3,500	600	Feb. 14, 1901	Aug. 1, 1902
J. Halliley ...	Sakamam, E. P.	3,500	600	Aug, 26, 1901	Oct. 1, 1902
R. F. Morris ...	Unnichchai, E. P.	5,000	600	Feb. 9, 1900	Mar. 12, 1901
J. A. Balfour ...	Anuradhapura, N.C. P.	4,000	600	Aug. 10, 1900	Sept. 1, 1900
L. C. J. Doxat ...	Mihintale, N.C. P.	4,000	600	Aug. 18, 1900	Sept. 12, 1900
G. D. Gordon ...	Minneri, N.C. P.	4,000	600	Nov. 17, 1900	Nov. 17, 1900
J. H. W. Park (Acting Irrigation Assistant)...	Colombo	4,000‡	600	Nov. 1, 1900	Sept. 15, 1902
J. H. C. Chute ...	Rugama, E. P.	4,000	600	Nov. 16, 1900	Dec. 6, 1900
W. Brown ...	Iranaimadu, N. P.	4,000	600	Jan. 10, 1901	Feb. 5, 1901
G. T. Bradley ...	Akattimurippu, N. P.	4,000	600	Jan. 10, 1901	Feb. 5, 1901
J. H. Fraser ...	Mackerakatti, P. of U.	4,000	600	Jan. 10, 1901	Feb. 5, 1901
C. F. S. Baker ...	Vavunikulam, N. P.	4,000	600	April 26, 1901	May 22, 1901
O. W. Henman ...	Colombo	4,000	600	Dec. 19, 1901	Jan. 15, 1902
L. P. Emerson ...	Ehetuwewa, N.W. P.	4,000	600	Feb. 1, 1900	Jan. 1, 1902
ASSISTANT ENGINEER.					
W. Bowden ...	Mackerakatti, P. of U.	1,440	360	June 1, 1899	Aug. 1, 1900
IRRIGATION SURVEYORS.					
H. C. Berwick (temporarily employed)§ ...	Colombo	2,158·40	600	July 1, 1900	July 1, 1901
C. Muttuvelu ...	Amparai, E. P.	1,200	—	Nov. 1, 1900	Nov. 1, 1900
M. A. Vasagam ...	Wiravila, S. P.	1,200	—	Nov. 1, 1900	Nov. 1, 1900
A. E. Byrde ...	Minneri, N.C. P.	1,800	—	Jan. 20, 1902	Oct. 1, 1902
O. D. Werkmeister ...	Iranaimadu, N. P.	1,200	240	Aug. 19, 1899	Oct. 1, 1902
ASSISTANT IRRIGATION SURVEYORS.					
H. A. E. de Vos ...	Colombo	720	—	Jan. 1, 1901	Jan. 1, 1901
A. Dirckze ...	Madawachchiya, N.C. P.	720	240	Aug. 1, 1897	Jan. 15, 1901
L. Misso ...	Colombo	720	240	Aug. 1, 1897	Jan. 15, 1901
P. Murugasoo ...	Vakaneri, E. P.	720	—	July 29, 1901	Jan. 1, 1902
C. A. Leembruggen ...	Mihintale, N.C. P.	720	—	July 16, 1902	Sept. 23, 1902
CHIEF IRRIGATION INSPECTORS.					
A. Goonewardene (transferred from Public Works Department)...	Kurunegala, N.W. P.	3,360	1,200	Aug. 9, 1877	Feb. 19, 1894
E. R. MacDonnell (do.)	Vavuniya, N. P.	3,000	1,200	Oct. 11, 1884	June 20, 1886
C. Kanakasuriyam ...	Anuradhapura, N.C. P.	3,000	960	March 1, 1892	Mar. 1, 1892
W. Ferguson (transferred from Forest Department) ...	Udukiriwila, S. P.	3,000	1,200	Dec. 6, 1888	April 1, 1899
F. Booth (transferred from Survey Department) ...	Anuradhapura, N.C. P.	3,000	1,200	Nov. 1, 1888	Feb. 1, 1900
IRRIGATION INSPECTORS.					
G. Hawkins, Matale District, C. P. ...	Dambulla	1,500	480	Dec. 1, 1893	April 1, 1899
S. Ramalingam, Kalawewa Yoda-ela, N.C. P.	Anuradhapura	1,500	480	Dec. 1, 1875	July 25, 1899
A. C. Buttery ...	Kanthalai, E. P.	1,500	480	June 1, 1883	Jan. 1, 1900
M. T. Winslow, Kalagam, Maminiya, and Eppawala korales, N.C. P.	Ipolagama	1,500	480	Jan. 10, 1878	Jan. 1, 1901
A. Nagamuttu, Crown tanks, Batticaloa District, E. P. ...	Kadukkamunai	1,500	480	Jan. 10, 1887	July 3, 1901

* Horse allowance. † On half pay leave at the present time. ‡ Draws additional salary as Acting Irrigation Assistant.
§ Mr. Berwick was appointed in the Survey Department on January 24, 1884, and retired on January 1, 1898.

	Station.	Salary.	Allowance.	Date of First Appointment under Government.	Date of Appointment to Present Rank.
IRRIGATION INSPECTORS.		Rs.	Rs.		
G. B. de Zilva, Crown tanks, Matara District, S. P. ...	Matara ...	1,500 ...	480 ...	Aug. 3, 1901 ...	Oct. 1, 1902
A. C. Rodrigo, Tissa Works, S. P. ...	Hambantota	1,500 ...	480 ...	Aug. 1, 1888 ...	Jan. 1, 1902
IRRIGATION SUB-INSPECTORS.					
First Class.					
J. F. Ratnayake, Irrigation Works, Ratnapura District, P. of S. ...	Balangoda ...	1,000 ...	360 ...	Feb. 1, 1891 ...	Jan. 1, 1895
V. Vraspillai, Musali and Nanaddan pattus, N. P.	Arippu ...	1,000 ...	360 ...	Jan. 1, 1871 ...	June 1, 1896
H. N. de Hoedt, Manmunai, Eruvil, Porativu, Karavativu, Chammanturai, and Akkarai pattus, E. P.	Batticaloa ...	1,000 ...	360 ...	Aug. 11, 1898 ...	Aug. 11, 1898
S. A. Weeraperuma, Wanni hatpattu, N.W.P.	Nikaweratiya ...	1,000 ...	360 ...	July 1, 1892 ...	Jan. 1, 1899
J. L. Caspersz, Irrigation Works, Nuwara Eliya District, C. P. ...	Nuwara Eliya ...	1,000 ...	360 ...	July 1, 1894 ...	Feb. 10, 1899
G. W. Selvadurai, Hiriyala hatpattu, N.W. P.	Matagomuwa ...	1,000 ...	360 ...	Feb. 1, 1891 ...	June 15, 1899
E. J. Meurling ...	Vavuniya, N. P. ...	1,000 ...	360 ...	April 1, 1894 ...	June 19, 1899
W. Keil	Mihintale, N.C. P. ...	1,000 ...	360 ...	Jan. 23, 1881 ...	April 1, 1900
P. Siriwardene ...	Ratmalagahawewa, N.C.P...	1,000 ...	360 ...	May 20, 1895 ...	Jan. 1, 1902
R. Gunaratnam ...	Galkulam, N.C. P. ...	1,000 ...	360 ...	July 4, 1898 ...	Jan. 1, 1902
S. Dabre ...	Kekirawa, N.C. P. ...	1,000 ...	360 ...	Feb. 10, 1899 ...	Feb. 1, 1902
Second Class.					
S. Kartigesu ...	Vavuniya, N. P.	720 ...	240 ...	Mar. 1, 1899 ...	Mar. 1, 1899
N. Outschoorn ...	Anuradhapura, N.C. P. ...	720 ...	240 ...	April 24, 1899 ...	April 24, 1899
V. Thalayasingham ...	Chilaw, N.W. P. ...	720 ...	240 ...	June 1, 1899 ...	June 1, 1899
A Rajakariar ...	Nedunkeni, N. P.	720 ...	240 ...	June 15, 1899 ...	June 15, 1899
W. H. Solomons	Katupota, N.W. P. ...	720 ...	240 ...	Feb. 1, 1900 ...	Feb. 1, 1900
C. A. David ...	Rotawewa, E. P. ...	720 ...	240 ...	April 1, 1899 ...	April 1, 1899
V. Nellailingam ...	Trincomalee, E. P. ...	720 ...	240 ...	March 1, 1900 ...	March 1, 1900
A. W. Kirthisinghe	Colombo ...	720 ...	240 ...	March 1, 1900 ...	March 1, 1900
F. S. Muttiah ...	Rugama, E. P. ...	720 ...	240 ...	Aug. 22, 1900 ...	Aug. 22, 1900
P. B. Weerasinghe ...	Bibile, P. of U. ...	720 ...	240 ...	Dec. 11, 1900 ...	Dec. 11, 1900
D. G. Attygalle ...	Ullukkulam, N.C. P. ...	720 ...	240 ...	Aug. 1, 1901 ...	Jan. 1, 1902
D. Speldewinde ...	Anamaduwa, N.W. P. ...	600 ...	240 ...	Sept. 10, 1901 ...	Jan. 1, 1902
V. Pirasudi (acting)	Chettukulam, N. P.	500 ...	— ...	Sept. 1, 1895 ...	July 2, 1901
G. C. Bartlett ...	Tembittiya, E. P. ...	720 ...	240 ...	March 1, 1900 ...	June 1, 1902
W. E. Lucas ...	Kandy, C. P. ...	720 ...	240 ...	May 1896 ...	Mar. 15, 1902
J. P. van Houten ...	Matara, S. P.	720 ...	240 ...	Aug. 1, 1901 ...	July 19, 1902
R. E. Dias (on probation) ...	Badulla, P. of U. ...	720 ...	240	July 16, 1902 ...	Aug. 15, 1902
H. A. Jayawikrama ...	Akattimurippu, N. P. ...	720 ...	240 ...	Aug. 25, 1902 ...	Aug. 25, 1902
C. Schokman ...	Mediyawa, N.W. P. ...	720 ...	240 ...	Oct. 1, 1902 ...	Oct. 1, 1902
GUARDIANS.					
First Class.					
P. B. Madahapola (Sub-Inspector, second class), Deduru-oya channels, N.W. P. ...	Muratawa ...	720 ...	180 ...	Jan. 14, 1890 ...	June 1, 1898
T. Y. Doole (Sub-Inspector, second class), Walawe-ganga scheme, S.P.	Mamadola ...	600 ...	180 ...	Feb. 5, 1900 ...	Feb. 5, 1900
B. de Silva (Sub-Inspector, second class) ...	Tissa, S. P. ...	720 ...	— ...	May 1, 1900 ...	May 1, 1900
R. H. M. Morgan ...	Kalawewa, N.C. P. ...	720 ...	180 ...	June 15, 1899 ...	Mar. 18, 1902
J. Phillips ...	Giant's tank, N. P. ...	720 ...	180 ...	Sept. 1890 ...	June 1, 1902
S. Colandavelu ...	Anuradhapura, N.C. P. ...	600 ...	— ...	Nov. 1, 1869 ...	Feb. 1, 1899
A. Ragel	Irakkamam, E. P. ...	600 ...	— ...	May 1887 ...	May 1901
Second Class.					
W. de Silva ...	Udukiriwila, S. P. ...	480 ...	— ...	Nov. 18, 1870 ...	May 15, 1881
G. Devasagayam ...	Kumbukkan-oya, P. of U...	480 ...	— ...	May 1890 ...	Jan. 1, 1893
K. Chellappah ...	Kalawewa, N.C. P. ...	480 ...	— ...	Feb. 10, 1894 ...	Oct. 14, 1898
R. Ludekens ...	Hali-ela, S. P. ...	480 ...	— ...	Nov. 1, 1890 ...	July 30, 1900
J. Le Febre ...	Tumpankeni, E. P. ...	360 ...	— ...	Dec. 4, 1886 ...	Feb. 28, 1897
W. T. de Zylva ...	Mediyawa, N.W. P. ...	360 ...	— ...	Jan. 4, 1896 ...	April 15, 1897
J. Anthonisz ...	Kanthalai, E. P. ...	360 ...	— ...	March 1, 1898 ...	March 1, 1898
C. M. Lourensz ...	Urubokke, S. P. ...	360 ...	— ...	— 1890 ...	July 30, 1900
D. Roy	Rugama, E. P. ...	360 ...	— ...	Jan. 1, 1898 ...	Nov. 1900
S. Sinnayah ...	Allai, E. P. ...	360 ...	— ...	April 1891 ...	March 15, 1901
L. B. Herat ...	Kurunegala, N.W. P. ...	360 ...	— ...	May 31, 1901 ...	May 31, 1901
W. S. Johnpulle ...	Kirama, S. P. ...	336 ...	— ...	Nov. 1, 1901 ...	Nov. 1, 1901
D. N. Samarasinghe ...	Ellawela, S. P. ...	300 ...	— ...	July 1, 1878 ...	Oct. 7, 1891
(Vacant) ...	Dandeniya ...	— ...	— ...	— ...	—

	Station.	Salary.	Allowance.	Date of First Appointment under Government.	Date of Appointment to Present Rank.
GUARDIANS—*contd.*					
Second Class—contd.		Rs.	Rs.		
P. Augustine ...	Rotawewa, E. P. ...	360 ...	—	... Sept. 1, 1896	... Feb. 16, 1902
C. Thambipillai ...	Potuvil, Sakamam, E. P. ...	300 ...	—	... Feb. 16, 1902	... Feb. 16, 1902
J. Stephen ...	Kadukkamunai, E. P. ...	300 ...	—	... June 1, 1901	... July 1, 1902
Nagan ...	Murungan, N. P. ...	300 ...	—	... May 28, 1902	... May 28, 1902
P. Fonseka ...	Batalagoda, N.W. P. ...	300 ...	—	... April 1, 1902	... April 1, 1902
A. Dissanayake ...	Kosgoda, N.W. P. ...	300 ...	—	... April 1, 1902	... April 1, 1902
P. Chellappa ...	Ambarai, E. P. ...	300 ...	—	... Dec. 1, 1899	... July 16, 1902
J. Kanapathipillai ...	Kaliyodi, E. P. ...	250 ...	—	... Mar. 16, 1880	... May 1901
T. B. C. Dassanaike ...	Dedduwa, S. P. ...	250 ...	—	... Oct. 12, 1894	... Oct. 12, 1894
V. Naganthirampillai ...	Periyakulam, E. P. ...	250 ...	—	... June 1, 1901	... June 1, 1901
D. S. Ponnampalam ...	Sadayantalawa, E. P. ...	250 ...	—	... May 1, 1900	... July 1, 1902
Superayan Wadiwail ...	Nikaweratiya, N.W. P. ...	250 ...	—	... April 1, 1902	... April 1, 1902
CLERKS.					
G. F. Johnpulle, Chief Clerk ...	Colombo ...	1,600 ...	300	... Aug. 16, 1880	... Jan. 1, 1899
A. Cannappa, Clerk, Head Office ...	do. ...	1,000 ...	—	... Nov. 1, 1875	... Jan. 1, 1902
F. M. Tambayah, do. ...	do. ...	700 ...	—	... April 9, 1893	... Jan. 1, 1902
J. N. Saverimutto do. ...	do. ...	600 ...	—	... Jan. 1, 1897	... Nov. 29, 1902
P. Ponniah Hubert, do. ...	do. ...	600 ...	—	... June 1, 1899	... Nov. 29, 1902
M. Abubakkar, do. ...	do. ...	480 ...	—	... Aug. 1, 1899	... Jan. 1, 1902
K. Periyatamby, do. ...	do. ...	480 ...	—	... Jan. 27, 1900	... Jan. 1, 1902
H. F. de Fonseka, do. ...	do. ...	480 ...	—	... Feb. 1, 1876	... Jan. 1, 1902
J. R. Tamber, do. ...	do. ...	480 ...	—	... July 2, 1900	... Jan. 1, 1902
V. Canagasabai, do. ...	do. ...	480 ...	—	... Nov. 1, 1900	... Jan. 1, 1902
P. de Silva, do. ...	do. ...	480 ...	—	... Jan. 4, 1902	... Jan. 4, 1902
T. D. Stephen, do. ...	do. ...	480 ...	—	... Feb. 25, 1901	... Oct. 23, 1902
C. Muttucumaru (Clerk to Chief Irrigation Inspector, N.W. P.)...	Kurunegala ...	480 ...	—	... Jan. 1, 1887	... Jan. 1, 1887
D. Patrick (Clerk to Irrigation Engineer, Anuradhapura) ...	Anuradhapura ...	420 ...	—	... Feb. 9, 1899	... Feb. 9, 1899
C. T. Tampoe (Clerk to Government Agent, E. P.) ...	Batticaloa ...	360 ...	—	... Feb. 1, 1894	... Dec. 15, 1899
M. S. Chellappa (Clerk to Chief Irrigation Inspector, N.C. P.) ...	Anuradhapura ...	360 ...	—	... Sept. 5, 1900	... Sept. 5, 1900
V. Mutturasa (Clerk to Chief Irrigation Inspector, N. P.) ...	Vavuniya ...	360 ...	—	... Nov. 1, 1900	... Nov. 1, 1900
A. F. Jayawardene (Clerk to Government Agent, P. of U.) ...	Badulla ...	360 ...	—	... June 25, 1902	... June 25, 1902
J. C. de S. Goonesekera, (Clerk to Government Agent, P. of S.) ...	Ratnapura ...	360 ...	—	... Nov. 15, 1896	... Oct. 23, 1902
DRAUGHTSMEN.					
J. Perera, Head Office...	Colombo ...	800 ...	—	... Jan. 6, 1898	... Jan. 1, 1902
M. F. Peiris, do. ...	do. ...	720 ...	—	... May 1, 1902	... May 1, 1902
ASSISTANT DRAUGHTSMEN					
S. Paramanathan ..	Colombo ...	360 ...	—	... Sept. 16, 1902	... Sept. 16, 1902
P. V. Subramaniam ...	do. ...	360 ...	—	... Nov. 15, 1902	... Nov. 15, 1902
Anthony J. Fernando ..	do. ...	360 ...	—	... Nov. 15, 1902	... Nov. 15, 1902

APPENDIX D.

List of Tanks restored and maintained by Government.

	Head at Sluice in Feet.	Area at Spill-level in Acres.
Northern Province.		
Vavuniya	12 ...	350
Mandukoddai	10·6 ...	210
Iratperiyakulam	15 ...	535
Mamadu	12 ...	162
Maha Irambaikulam	10 ...	144
Kanakarayankulam...	12 ...	174
Periyakulam	13 ...	119
Vengalacheddikulam	10 ...	156
Olukkulam	14 ...	479
	(18	876)
Giant's tank	— ...	—
Southern Province.		
Kekanadura	26·5 ...	216
Ellawela	30 ...	1,260
Hali-ela	30 ...	240
Uyanwewa	14 ...	29
Denegama	13 ...	782
Kirama	4 ...	200
Dandeniya	30 ...	47
Udukiriwila	12 ...	650
Tissawewa	11 ...	?
	(10	425)
Yodawewa	9 ...	1,200
Debarawewa	6 ...	130
Henagahapuwewa and Konwewa	4 ...	80
Mutiyammawewa	4 ...	35
Eastern Province.		
Kantalay	24 ...	3,486
Periyakulam	8 ...	200
Andankulam	9 ...	182
Allai	9 ...	2,632
Peruvelikulam	4 ...	352
Ilakkantai	3 ...	105
Rugama	14·9 ...	2,504
Pullumalai	7·6 ...	45
Maha-oya	9 ...	18
Kadukamunai	9·16 ...	564
Pulugannawa	20·5 ...	338
Hakgalawewa	8·14 ...	22
Kehelulla	8·14 ...	1½
Diwulana	19·5 ...	361
Tumpankeni	12 ...	145
Sadayantalawa	12 ...	360
Viragoda	12 ...	296
Amparai	12 ...	816
Irakkamam	14 ...	1,800
Sakamam	13 ...	450
Rotawewa	10 ...	553
Lahugala	8 ...	300
Panawa	10 ...	300
Naula	10 ...	150
Western Province.		
Kadurugahawewa	6·5 ...	14
Dikmaga Pahalawewa	5·75 ...	9
Polgahawewa	7·5 ...	4
Dikmaga Ihalawewa	6·25 ...	7
Boralesgamuwa	9 ...	30
Central Province.		
Pelwehera tank	8·5 ...	15
Waluganwewa	19·5 ...	6·3
Eraula	3 ...	5
Karawilahena	8 ...	6
North-Central Province.		
Kalawewa	22 ...	?
	(20	4,425)
Tissawewa	15·3 ...	396
Bassawakkulam	16·5 ...	255
Nuwarawewa	17 ...	2,100
Maha Madawachchiya	12 ...	177
North-Western Province.		
Kurunegala	8 ...	112
Wenoruwewa	17 ...	202
Magallawewa	15 ...	768
Maha Uswewa	15 ...	?
	(12	328)
Galgamuwa	22 ...	668
Mediyawa	14 ...	275
Batalagoda	11·7 ...	635
Tinapitiya	5·5 ...	178
Meddeketiya	10 ...	85

	Head at Sluice in Feet.	Area at Spill-level in Acres.
Province of Uva.		
Dambegalla	14 ...	20
Nelunwewa	6 ...	25
Horaborawewa	18 ...	30
Mahatalawewa	9 ...	1
Udawewa	10 ...	50
Hambegamuwa	13 ...	251
Medabeddewewa	9·6 ...	4
Province of Sabaragamuwa.		
Hinguruarawewa	21·83 ...	40
Embilipitiya	3·5 ...	35
Tunkame Mahawewa	5·67 ...	15
Alutwewa	6·67 ...	15
Epitagodawewa	5·5 ...	10
Hirigalkatuwawewa	5·83 ...	15
Rambukkanawewa	5 ...	4
Hinguruwewa	18 ...	30
Mulgama	— ...	—

List of Tanks in course of Construction or Restoration during 1902.

Northern Province.		
Kanukkeni tank	15 ...	?
	(16	430)
Iranaimadu	26 ...	4,530
Dri-aru	14 ...	212
Eastern Province.		
Vakaneri tank	15 ...	1,068
Unnichchai	23 ...	2,920
Tembittiya	9 ...	259
Vammiyadi	12 ...	195
Sakamam	13 ...	450
North-Central Province.		
Maha Iluppallama	14 ...	?
	(16	559)
Minneri tank	29 ...	?
	(28	4,358)
Nachchaduwa	23 ...	3,900
Manankettiya	14 ...	?

List of Surveyed Tanks not yet restored or constructed.

Northern Province.		
Pavatkulam	18 ...	2,029
Kuray	10 ...	324
Upper reservoir, Giant's tank	17 ...	2,670
Akattimurippu	? ...	?
Vavunikulam	18 ...	1,975
Southern Province.		
Oluwila	7 ...	140
Koggala	18 ...	1,053
Eastern Province.		
Kalugalbemma	14 ...	128
Kondavaddavan	19 ...	890
Valattapatti	10 ...	360
Helawa	8 ...	55
Wadugamuwa	8 ...	193
Maduvilkulam	6 ...	140
Tumparai	? ...	?
North-Central Province.		
Hurulla	18 ...	1,032
Mahagalkadawala	16 ...	3,011
Sangilikanadarawa	12·6 ...	646
Eruwewa	? ...	?
North-Western Province.		
Siyambalangamuwa...	22 ...	1,405
Pandawewa	15 ...	1,360
Hengamuwa	10 ...	246
Nirammulla	20 ...	644
Uriyawa	15 ...	145
Kurundulla	9 ...	84·5
Province of Uva.		
Mackerakatti	150 ...	1,830

Statement of Tanks and Channels in charge of the Government Agents on December 31, 1902.

Province.	Works restored and maintained by Government.		Village Tanks and Channels.			
			Completed.		In Hand.	
	Tanks.	Channels.	Tanks.	Channels.	Tanks.	Channels.
Western	5	—	6	7	—	—
Central	3	5	3	28	149	—
Northern	8	—	3	—	507	—
Southern	3	8	98	99	626	6
Eastern	8	6	53	—	78	—
North-Western	8	3	961	—	374	—
North-Central	—	1	825	3	801	—
Uva	15	28	5	1,706	30	—
Sabaragamuwa	9	—	—	11	—	—

APPENDIX E.

STATE OF THE IRRIGATION FUND IN 1902.

	Rs. c.	Rs. c.
Balance brought forward from 1901	—	6,174 82*
Refunds credited during the year—Total credited by Treasurer	7,486 61	
Less refunds on account of personal voucher, 1901, included in balance brought forward	3,637 35	3,849 26
		10,024 8
Expended during the year on sanctioned estimates ...	8,304 93	
Miscellaneous expenditure not charged to estimates ...	356 31	8,661 24
Balance carried forward to 1903	—	1,362 84†
Balance in Treasury on January 1, 1903		Nil
Total ...		1,362 84

* This is the correct amount, and not Rs. 6,175·22, as shown in the last report.
† This balance is outstanding on account of advance for recruiting coolies.

Statement of Expenditure on Account of Irrigation during 1902.

	Amount of Estimate sanctioned and apportioned in 1903. Rs. c.	Amount expended on such Estimate. Rs. c.	Balance. Rs. c.
Western Province.			
Salaries, &c., Headquarters ...	18,849 99	14,467 12	4,382 87
Apportionment for construction of works, &c. including unexpended balances ...	803 75	802 79	0 96
Surveys	—	—	—
Maintenance	369 0	312 59	56 41
Central Province.			
Apportionment for construction of works, &c.	393 23	275 55	117 68
Surveys	728 66	208 12	520 54
Maintenance	2,599 20	1,896 80	702 40
Allowances	2,160 0	1,469 67	690 33
Northern Province.			
Apportionment for construction of works, &c.	98,918 42	97,406 44	1,511 98
Surveys	7,920 55	4,427 16	3,493 39
Maintenance	6,503 43	6,452 21	51 22
Allowances	5,496 0	5,447 80	48 20
Southern Province.			
Apportionment for construction of works, &c.	51,380 58	45,004 40	6,376 18
Surveys	4,303 15	3,088 23	1,214 92
Maintenance	18,593 0	17,796 14	796 86
Allowances	5,330 0	3,392 90	2,137 10
Eastern Province.			
Apportionment for construction of works, &c.	115,696 18	103,625 11	12,071 7
Surveys	1,737 12	1,715 62	21 50
Maintenance	14,498 0	14,410 46	87 54
Allowances	8,700 0	7,085 68	1,614 32
North-Western Province.			
Apportionment for construction of works, &c.	58,231 57	28,374 12	29,857 45
Surveys	8,146 28	7,300 93	845 35
Maintenance	11,402 28	10,784 28	618 0
Allowances	6,042 0	5,722 81	319 19
North-Central Province.			
Apportionment for construction of works, &c.	172,046 74	146,242 90	25,803 84
Surveys	7,747 56	6,483 27	1,264 29
Maintenance	22,575 0	19,293 7	3,281 93
Allowances	8,970 0	7,409 98	1,560 2
Province of Uva.			
Apportionment for construction of works, &c.	7,382 99	6,446 85	936 14
Surveys	3,557 90	815 33	2,742 57
Maintenance	2,808 0	2,476 9	331 91
Allowances	1,490 0	1,489 93	0 7
Province of Sabaragamuwa.			
Apportionment for construction of works, &c.	2,270 6	1,596 43	673 63
Surveys	—	—	—
Maintenance	3,655 0	3,384 46	270 54
Allowances	360 0	360 0	—
Miscellaneous.			
Instruments, &c.	40,378 26	29,289 46	11,088 80
Total ...	722,243 90	606,754 70	115,489 20

APPENDIX F.

Statement of Works in Progress and undertaken in 1902.

Estimate No.	Name of Work.	Balance brought forward.	Amount of Estimate.	Actual Expenditure during the Year.	Remarks.
	NORTHERN PROVINCE.				
	Estimates brought forward from 1901.	Rs. c.	Rs. c.	Rs. c.	
239 of 1898	For purchasing and transporting tools for the use of Irrigation Inspectors ...	447 37	—	391 25	—
17 of 1901	For transporting cement pipe sluices from pipe factory	436 26	—	—	—
139 of 1901	For making cement concrete pipes in Mannar District	479 83	—	51 25	Transport fund and value of cement
181 of 1901	For making cement concrete pipes in Mullaittivu District	810 60	—	809 71	Pipes made, moulds repaired, &c.
193 of 1901	For a bungalow for Sub-Inspector, Vavuniya	1,245 99	—	1,245 99	Nearing completion
	Estimates sanctioned in 1902.				
129	For repairing the house of the Sub-Inspector of Village Tanks at Malikaitidal ...	—	75 0	73 25	Work completed
144	Palakuli tank: for erecting a sluice at Palakuli tank in the Mannar District, Northern Province	—	652 0	651 31	do.
163	For the completion of the Giant's tank works, Northern Province ...	—	7,654 64	7,066 95	Work will be completed early in 1903
33 of 1901	Giant's tank restoration (Rs. 304,402) ..	—	52,067 4	52,067 4*a*	do.
195 of 1900	Kanukkeni tank: for additional works (Rs. 66,727)	—	16,570 83	16,570 83*b*	In progress
—	Karachchi scheme (Rs. 1,105,714) ...	—	18,478 86	18,478 86	do.
	Total ...	3,420 5	95,498 37	97,406 44	
	SOUTHERN PROVINCE.				
	Estimates brought forward from 1901.				
163 of 1897	For opening the 2nd mile of the outlet channels (Walawe), Rs. 2,775 ...	1,072 19	—	681 13*c*	Clearing jungle, uprooting, weeding, &c.
203 of 1897	For necessary repairs to ripple wall, Udukiriwila (Rs. 2,865)	11 29	—	—*d*	—
1 of 1900	For constructing four distributing sluices (Rs. 270)	29 63	—	28 75*e*	Built drop walls of stone masonry on upper and lower sides; fixed and completed No. 4 sluice
160 of 1900	For improvement of road near Liyangahatotaela (Rs. 1,972)	303 26	—	221 99*f*	Removing and re-fixing platform; 4 cubes masonry and 76·19 cubes earthwork done
183 of 1900	For repairs to Dedduwa bund (Rs. 2,600) ...	1,948 0	—	1,170 0*g*	Breaking stones, building ripple wall, &c.
191 of 1900	For Walawe-ganga channels (Rs. 32,587·15)...	5,257 50	—	2,117 42*h*	—
15 of 1901	For a guardian's bungalow at Walawe-ganga (Rs. 1,814·77)	310 65	—	21 5*i*	Clearing jungle and opening approach road to bungalow
187 of 1901	For certain repairs and improvements at Arachchi amuna (Rs. 590) ...	138 20	—	137 55*j*	Sawing timber, removed decayed timber, refitting new ones
207 of 1901	For improving the spill water at Denegama (Rs. 3,650)	2,497 0	—	1,135 0*k*	795 cubes of earthwork done, paid compensation for land, &c.
208 of 1901	For re-planking Liyanagahatota anicut (Rs. 988)	958 24	—	743 27*l*	Sawing planks and planing
	Estimates sanctioned in 1902.				
5	Tissa irrigation scheme: for improvements at the Kirinda-oya irrigation works (Rs.91,559)	—	37,983 62	37,983·62	Improving and raising bund, temporary building, and lines erected, &c.

a Previous expenditure Rs. 252,234·90.
b Do. „ 28,533·17.
c Do. „ 1,702·81.
d Do. „ 2,853·71.
e Do. „ 240·39.
f Do. „ 1,668·74.
g Previous expenditure Rs. 652·00.
h Do. „ 27,329·65.
i Do. „ 1,504·12.
j Do. „ 451·80.
k Do. „ 1,153·00.
l Do. „ 29·76.

Estimate No.	Name of Work.	Balance brought forward.	Amount of Estimate.	Actual Expenditure during the Year.	Remarks.
		Rs. c.	Rs. c.	Rs. c.	
12	Hindeliya tank : for repairs to the sluice ...	—	55 0	—	—
138	Denegama timber bridge : for renewing the timber bridge 20 ft. span over the inlet channel of Wepata-ela sluice ...	—	250 0	244 25	96½ cubic ft. sawn, hill timber purchased, removed old platform and renewed with new timber
146	Timber bridge at Urubokka : for renewing the timber bridge 20 ft. span over the spill water on the minor road at Urubokka ...	—	390 0	386 55	Value of 104 cubic ft. sawn, new timber 50 cubic ft., cement concrete, &c.
174	For urgent repairs to the sluices of Kekunadura tank	—	176 0	133 82	Value of one iron bracket, value of 100 gunny sacks, and 12 cubic ft. sawn new timber
	Total ...	12,525 96	38,854 62	45,004 40	
	EASTERN PROVINCE.				
	Estimates brought forward from 1901.				
187 of 1898	For transporting and inserting cement concrete pipe sluices to village tanks in Bintenna (Rs. 300)	36 50	—	—	—
201 of 1900	For building a guardian's bungalow at Irakkamam (Rs. 1,813)	170 42	—	159 90*a*	Whitewashing, digging well, &c.
213 of 1900	For repairs to Allai tank (Rs. 400) ...	78 68	—	78 58*b*	Replaced new planks for sluice, distribution gate, &c.
214 of 1900	For repairs to the sluices at Pattipolai-aru (Rs. 1,796)	595 82	—	241 28*c*	—
218 of 1900	For transport of pipe sluices to village tanks in Batticaloa and Kalmunai Districts ...	441 16	—	439 55	Transport
198 of 1901	For a guardian's bungalow at Kanthalai (Rs. 1,709)	1,097 83	—	1,097 1*d*	Clearing jungle, whitewashing, and cement flooring 13·75 squares ; Calicut tiles
199 of 1901	For a channel to lands under the western sluice, Kanthalai (Rs. 12,750) ...	11,442 68	—	4,483 61*e*	Clearing jungle, wedging stone lines, improving roads, &c.
205 of 1901	For inserting cement pipe sluices in Bintenna and Panama	96 4	—	57 94	Transport and insertion
210 of 1901	For manufacture and transport of cement pipes for Trincomalee	292 80	—	289 16	Materials and transport
218 of 1901	For manufacture of cement pipe sluices ...	2,022 70	—	2,022 23	Materials, labour, and pay of watcher
228 of 1901	For repairs at Vaddikkulam and Kumarapodiyakulam	154 27	—	142 60	Materials and labour
	Estimates sanctioned in 1902.				
1	Pattipolai-aar works : for protecting abutments of anicuts and sluices at the Pattipolai-aru scheme	—	6,049 0	3,277 73	Pitching and wedging stone, transport, &c.
14	Irrigation guardian's bungalow : for building a guardian's bungalow at Andankulam, E.P.	—	1,875 0	1,873 44	Whitewashing, plastering Calicut tiled roofing, &c.
15	For building a guardian's bungalow at Allai tank	—	1,975 0	1,974 92	Laying concrete, plastering, and Calicut tile roofing
17	Kalingulas for village tanks : for the insertion of three kalingulas for village tanks in Eruvil pattu and Akkarai pattu ...	—	1,842 0	73 68	Transport
96	Quarters for Sub-Inspector, Panama pattu : for a well and fence at the Sub-Inspector's quarters	—	84 75	19 7	Fencing and transport
113	Vaddikulam in Periyanilavanai in Karavaku pattu : for the proposed addition of wing walls, &c., to old sluices	—	273 20	269 90	Transport, labour, and materials

a Previous expenditure Rs. 1,642·58.
b Do. „ 321·32.
c Do. „ 1,200·18.
d Previous expenditure Rs. 611·17.
e Do. „ 1,307·72.

Estimate No.	Name of Work.	Balance brought forward.	Amount of Estimate.	Actual Expenditure during the Year.	Remarks.
		Rs. c.	Rs. c.	Rs. c.	
121	Makilur Periyakulam in Eruvil pattu: for removing the damaged wing wall and for constructing another in its place for a kalingula	—	80 66	69 72	Transport, labour, and materials
123	Quarters for Sub-Inspector of Bintenna: for the repair of the bungalow at Maha-oya ...	—	50 0	50 0	Transport and repairs
133	Pullumalai tank: for repairs ...	—	223 43	190 55	Laying concrete, earth excavating, &c.
158	For the manufacture and transport of special vertical pipes to bear up the pressure of 12 ft. of water, Trincomalee District, E.P. ...	—	175 0	175 0	Materials, transport, and labour
192 of 1900	Sakamam and Vammiyadi: for the proposed works (Rs. 59,058)	—	11,950 97	11,950 97*a*	Work in progress
194 of 1900	Anicuts below Rugam:- for the proposed works (Rs. 87,376)	—	22,739 42	22,739 42*b*	do.
203 of 1900	Tembittiya tank: for restoration (Rs. 16,604)	—	5,147 21	5,147 21*c*	do.
222 of 1900	Vakaneri scheme: for the proposed irrigation works (Rs. 353,654·50)	—	35,321 53	35,321 53*d*	do.
182 of 1902	For the proposed works at Unnichchai tank (Rs. 684,679)	—	11,480 11	11,480 11*e*	do.
	Total ...	16,428 90	99,267 28	103,625 11	
	WESTERN PROVINCE.				
	Estimates brought forward from 1901.				
	Nil.				
	Estimates sanctioned in 1902.				
118	Boralesgomuwa: for repairs ...	—	803 75	802 79	Completed
	Total ...	—	803 75	802 79	
	CENTRAL PROVINCE.				
	Estimates brought forward from 1901.				
162 of 1901	For furniture to the Irrigation Sub-Inspector, Nuwara Eliya	28 53	—	21 70	Usual non-effective charges
	Estimates sanctioned in 1902.				
156	For adjusting the sluice, Waluganwewa ...	—	140 0	103 40	Usual maintenance, repairs
164	For repairs to irrigation ela at Ulapane station road	—	75 0	0 75	do.
89	For urgent minor works	—	149 70	149 70	—
	Total ...	28 53	364 70	275 55	
	NORTH-CENTRAL PROVINCE.				
	Estimates brought forward from 1901.				
211 of 1898	For working the grab dredge at Giritalawe ...	366 21	—	—	—
26 of 1901	For making 260 cement pipe sluices for North-Central Province	2,717 39	—	2,041 10	Work is approaching completion
32 of 1901	For a stable and cattle shed at Ulukkulam ...	58 20	—	—	To be done in 1903
157 of 1901	For repairs of Muwaetagama tank spill ...	106 77	—	105 66	—
223 of 1901	For an irrigation bungalow at Anuradhapura	2,877 99	—	2,452 43	Excavation 23·30 cubes masonry, timber, work, 26·18 cubes concrete, value for tiles, &c.
224 of 1901	For irrigation registers	59 0	—	56 64	Completed
233 of 1901	For bungalow for Chief Irrigation Inspector	4,041 99	—	1,023 2	146 cubes concrete, 5 cubes earthwork, value of tiles, &c.
235 of 1901	For an irrigation culvert near 49th milepost in Mannar road	136 0	—	134 42	Completed
182 of 1901	For re-building of Relapanawa tank spill ...	1,380 71	—	1,057 3	—
	Estimates sanctioned in 1902.				
2	Maha Diulwewa sluice: for repairs ...	—	430 0	128 80	—
3	Restoration of village tanks: for building 4 camps at Galapitagala, Kainatama, Konewewa, and Kirimetiyagama, and for making ten bund gauges in wood, North-Central Province	—	154 63	70 13	Completed

a Previous expenditure Rs. 17,894·11,
b do. „ 17,202·34.
c do. „ 4,910·32.
d Previous expenditure Rs. 65,706·70,
e do. „ 6,699·63.

Estimate No.	Name of Work.	Balance brought forward.	Amount of Estimate.	Actual Expenditure during the Year.	Remarks.
		Rs. c.	Rs. c.	Rs. c.	
18	Bassawakulam sluice : for stopping leaks ...	—	1,093 0	1,095 0	Completed
74	Mananketiya tank : for repairing the sluice ...	—	130 0	129 90	do.
119	Eliya Diulwewa : for the reconstruction of the spill wall of Eliya Diulwewa tank ...	—	809 67	732 66	Breaking down old masonry, excavating earth, rock cutting, &c.
124	Epolagama bungalow : for repairing the irrigation bungalow	—	234 0	228 42	Completed
131	For transport of cement concrete pipes to village tanks, North-Central Province ...	—	938 0	824 83	Nearly completed
132	For filling up the pond between the Irrigation Engineer's and Superintendent of Surveys bungalow, Anuradhapura, leaving only a channel from the drinking pokuna of Bassawakulam	—	679 38	679 38	562·48 cubes earthwork done, value of bricks, and lime
150	Mananketiya tank : for repairs	—	17,700 0	834 17	In progress
159	Kaduruwegama lands : for constructing a channel from 3 miles 23 chains on the Kalawewa Yodaela to 500-acre plot, Allaperumal, North-Central Province ...	—	1,803 9	325 47	Clearing trace 47 lines, earthwork, transport, &c.
166	Epolagama bungalow : for building stable, cattle shed, and cart shed...	—	70 0	2 10	In progress
171	For transporting cement concrete pipes of Hurulu palata	—	1,830 0	54 90	To be done in 1903
176	For building outhouses in Kekirawa ...	—	97 0	2 91	do.
181	For printing certain registers for the use of the village tank staff, North-Central Province	—	45 0	1 35	To be completed shortly
183	For constructing a distribution gate to supply Mr. Sampander's channel ...	—	23 45	—	—
186	For the repair of Muwaetagama tank ...	—	22 68	22 0	—
206	Kalawewa Yodaela : for improving. (Rs. 154,168)	—	44,493 18	44,493 18*a*	Work in progress
202 of 1900	Maha Iluppalama: for completing the restoration (Rs. 39,450)	—	18,083 24	18,083 24*b*	do.
176 of 1901	Kalawewa Yodaela alterations: for alterations at the main sluice (Rs. 20,562) ...	—	2,263 65	2,263 65*c*	do.
120 of 1902	Minneri tank : for restoration (Rs. 225,093)	—	69,247 59	69,247 59*d*	do.
—	Nachchaduwa restoration (Rs. 450,735) ...	—	60 0	60 0	do.
—	Mahagalkadawala restoration (Rs. 415,161)...	—	94 92	94 92	do.
	Total ...	11,744 26	160,302 48	146242 90	
	NORTH-WESTERN PROVINCE.				
	Estimates brought forward from 1901.				
186 of 1898	For raising and widening Medeketiya tank bund	165 37	—	160 16	Completed
143 of 1899	For additional works in Deduru-oya (Rs. 1,492)	93 28	—	7 50*e*	Work will be completed shortly
145 of 1899	For minor channel to Tittawelagala (Rs. 140·31)	96 6	—	—*f*	—
146 of 1899	For opening a distributing channel to Uyangala (Rs. 9,139)	1,090 55	—	835 30*g*	Work will be completed shortly
147 of 1899	For two Inspectors' and one Guardian's bungalow (Rs. 3,864·06)	18 87	—	18 20*h*	Completed
202 of 1899	For repairs and improvements at Maha Uswewa	147 22	—	—	No work was done because the tank was full
215 of 1900	For repairs to Medeketiya tank ...	1,072 45	—	1,026 63	Completed
69 of 1901	For building sluice in Hulugalla tank ...	349 99	—	48 0	Collected materials, construction put back because the tank was full
140 of 1901	For new office for Irrigation Department ...	1,992 83	—	1,912 83	Completed
163 of 1901	For constructing a 12-in. sluice in Ihala Giribawa	928 24	—	146 0	Collected materials, construction put back because the tank was full

a Previous expenditure Rs. 67,220·28.
b Do. ,, 19,351·80.
c Do. ,, 2,113·63.
d Do. ,, 80,601·91.
e Previous expenditure Rs. 1,398·72.
f Do. ,, 44·25.
g Do. ,, 8,048·45.
h Do. ,, 3,845·19.

Estimate No.	Name of Work.	Balance brought forward.	Amount of Estimate.	Actual Expenditure during the Year.	Remarks.
		Rs. c.	Rs. c.	Rs. c.	
172 of 1901	For constructing a boulder dam in Molewa tank	196 0	—	—	—
175 of 1901	For six masonry sluices in village tanks ...	2,924 68	—	787 32	Collected materials and paid for them, tanks full, construction put back
186 of 1901	For constructing a kalingula spill in Tabbowa tank	1,102 40	—	267 50	Landowners object to spill being constructed. They are willing to pay for materials and build the spill their own way; under consideration of Government Agent
200 of 1901	For cement concrete pipes for village tanks in Kurunegala District	589 47	—	574 77	Completed
206 of 1901	For additional works in Medeketiya tank ...	846 99	—	844 18	do.
217 of 1901	For manufacturing cement concrete pipes for sluicing 125 village tanks... ...	3,047 16	—	3,029 48	do.
	Estimates sanctioned in 1902.				
11	Irrigation guardian's bungalow: for building a guardian's bungalow, store, and cooly lines for the Irrigation Department at Kurunegala	—	4,059 0	4,058 63	Work completed
136	Deduru-oya: for improvement and completion of works at the Deduru-oya works ...	—	20,819 0	7,741 46	Work in progress
137	Deduru-oya: for improvement and completion of Deduru-oya works (supplementary)	—	960 0	250 13	Pay of clerk
141	For establishing a factory for making cement concrete pipes, &c., for sluicing village tanks in Chilaw District	—	710 0	14 20	Transport deduction
142	For making 9-in. pipes, &c., for sluicing village tanks in Chilaw District ...	—	3,150 0	63 0	do.
165	Tinipitiya tank: for repairing the sluice and kalingula spill in Tinipitiwewa ...	—	269 0	5 38	In progress
167	For sinking a well near guardian's bungalow, Kurunegala	—	130 0	2 60	Transport deduction
168	For transporting cement concrete pipes for sluicing 105 village tanks in Katugampola hatpattu	—	2,600 0	729 59	In progress. Pipes are being transported
184	For manufacturing cement concrete pipes for sluicing 182 village tanks in the Kurunegala and Chilaw Districts ...	—	3,345 0	415 25	In progress. Pipes are being made
185	For the transport of cement concrete piping for sluicing village tanks in the Kurunegala and Chilaw Districts	—	2,092 0	—	In progress. Pipes are being transported
181 of 1899	Deduru-oya works (Rs. 25,989·80) ...	—	5,337 1	5,337 1*a*	Work will be completed shortly. Estimate completed
89	Urgent minor works	—	99 0	99 0	—
	Total ...	14,661 56	43,570 1	28,374 12	
	PROVINCE OF UVA.				
	Estimates brought forward from 1901.				
183 of 1901	For office expenses incurred by the Provincial Irrigation Board	26 33	—	2 35	—
211 of 1901	For distributing gates to East Gal-oya channel	618 82	—	618 82	Completed
220 of 1901	For repairs to Okkampitiya Yoda-ela ...	485 0	—	484 63	do.
	Estimates sanctioned in 1902.				
6	Dehigolla Maha-ela: for replacing the washed away plankings to Dehigolla Maha-ela in Yatikinda	—	54 20	51 86	Completed
111	Sudupanawila-ela: for rebuilding the damaged and washed away masonry which supports the iron troughing placed on Sudupanawila-ela, Wellawaya division ...	—	305 30	305 30	do.
114	Alut-ela: for repairs	—	3,782 0	3,781 77	do.
139	Buttala anicut: for repairs to Buttala anicut and channel	—	295 0	33 85	—
145	Kalapuhana-ela: for replacing the damaged troughing on Kalapuhana-ela in Wellawaya division	—	71 70	2 15	Transport deduction

a Previous expenditure Rs. 20,647·68

Estimate No.	Name of Work.	Balance brought forward.	Amount of Estimate.	Actual Expenditure during the Year.	Remarks.
		Rs. c.	Rs. c.	Rs. c.	
155	For re-thatching with straw the whole roof of the irrigation bungalow at Hambegamuwa tank	—	64 75	64 75	Completed
172	For repairs to Sub-Irrigation Inspector's quarters at Bibile	—	69 7	2 7	Transport deduction
177	For repairs to Sudupanawila anicut ...	—	110 82	3 32	do.
180	For repairs to Alut-ela, Badulla ...	—	1,500 0	1,095 98	Work in progress
	Total ...	1,130 15	6,252 84	6,446 85	
	PROVINCE OF SABARAGAMUWA.				
	Estimates brought forward from 1901.				
71 of 1901	Panamure bungalow : for repairs ...	97 0	—	96 0	Completed
230 of 1901	Panamure south channel : for repairs ...	276 9	—	235 0	Repairs and cement
234 of 1901	Kitulbokke-ganga anicuit : for repairs ...	229 89	—	10 0	Repairs, &c.
115 of 1900	Tunkame Alutwewa sluice : for repairs ...	42 35	—	—	—
	Estimates sanctioned in 1902.				
7	Panamure north channel : for certain repairs	—	145 0	144 85	Transport and repairs
9	Kaltota channel : for repairing damages ...	—	1,286 0	916 85	Transport, cement, repairs
89	For urgent minor works	—	43 73	43 73	—
67	Repairs to Tunkame bungalow ...	—	150 0	150 0	Transport and repairs
	Total ...	645 33	1,624 73	1,596 43	
	MISCELLANEOUS.				
	Estimates brought forward from 1901.				
159 of 1901	For purchase of drawing materials, &c. ...	360 0	—	346 82	—
226 of 1901	For recruiting pioneers in India ...	775 34	—	63 16	—
	Estimates sanctioned in 1902.				
13	Surveying and drawing instruments : for the purchase of surveying and drawing instruments and materials	—	3,131 25	3,049 16	—
16	Drawing materials : for purchasing drawing materials	—	59 50	59 0	—
69	Rent : for rent of chamber No. 4, Victoria Arcade, occupied as office of the Director of Irrigation	—	1,800 0	1,575 0	—
90	For the purchase of tools and plant for the use of the Irrigation Department ...	—	20,000 0	11,139 61	—
91	For the purchase of stationery for the use of the Irrigation Department during 1902 ...	—	1,500 0	1,159 18	—
92	For miscellaneous expenses, 1902 ...	—	250 0	236 66	—
93	For the purchase of furniture for the use of the Irrigation Department during 1902 ...	—	1,000 0	604 20	—
100	For payment of damages to articles claimed by Messrs. Beato & Co.	—	315 0	315 0	—
116	Surveying instruments : for the purchase of surveying instruments and drawing office requisites for the Irrigation Department ...	—	194 90	169 20	—
117	Drawing materials : for purchasing drawing materials	—	54 0	54 0	—
130	For purchasing a tent, complete ...	—	145 50	132 50	—
134	Tent : for purchasing a tent, complete ...	—	132 50	132 50	—
135	For erecting a temporary office for the Director of Irrigation	—	7,220 0	7,219 63	—
140	For purchasing two tents, complete ...	—	265 0	265 0	—
160	For the purchase of two tents for the Irrigation Department	—	330 0	—	—
161	For the payment of house rent for one Irrigation Inspector and six Irrigation Sub-Inspectors	—	576 0	536 0	—
162	For payment of return passage to England for Irrigation Engineers ...	—	1,200 0	1,200 0	—
178	For the erecting of temporary offices for the Irrigation Department	—	115 0	79 57	—
187	For office contingencies, 1902 (supplementary)	—	45 0	44 0	—
188	For the purchase of instruments for the use of the Irrigation Department	—	909 27	909 27	—
	Total ...	1,135 34	39,242 92	29,289 46	

Statement of Expenditure on Maintenance of Irrigation Works in 1902.

Estimate No.	Name of Work.	Balance brought forward.	Amount of Estimate.	Actual Expenditure during the Year.	Remarks.
	NORTHERN PROVINCE.	Rs. c.	Rs. c.	Rs. c.	
	Estimates sanctioned in 1902.				
10	For the payment of excess in upkeep of Mandukottai and Vavuniya tanks ...	—	3 43	3 43	Usual upkeep
	For upkeep—				
26	Crown tanks near Vavuniya ...	—	1,200 0	1,195 94	do.
27	Vengalacheddikulam and Peria Olukkulam	—	500 0	483 22	do.
52	Giant's tank	—	3,300 0	3,299 56	do.
53	Kanukkeni tank : finished portion ...	—	600 0	596 27	do.
54	Periyakulam	—	200 0	193 98	do.
101	Kanakarayankulam	—	200 0	197 65	do.
102	Sluiced village tanks	—	500 0	482 16	do.
	Total ...	—	6,503 43	6,452 21	
	SOUTHERN PROVINCE.				
	Estimates sanctioned in 1902.				
	For upkeep—				
19	Kirindi-oya (Tissa) irrigation works ...	—	2,550 0	2,530 0	Usual upkeep
20	Walawe-ganga irrigation works ...	—	4,620 0	4,579 50	do.
55	Kirama system do.	—	1,260 0	1,258 60	do.
56	Waggalmodara flood outlets	—	413 0	408 26	do.
57	Dedduwa irrigation works ...	—	969 0	568 54	do.
58	Gangaboda pattu do. ...	—	3,860 0	3,790 42	do.
59	Dendeniya do.	—	850 0	838 78	do.
60	Denegama and Uyanwewa irrigation works	—	781 0	771 0	do.
61	Kekanadure irrigation works ...	—	1,000 0	995 25	do.
62	Urubokka do.	—	850 0	724 85	do
63	Udukiriwila do.	—	1,440 0	1,330 94	do.
	Total ...	—	18,593 0	17,796 14	
	EASTERN PROVINCE.				
	Estimates sanctioned in 1902.				
	For upkeep—				
39	Kadukkamunai and Pulukunavi tanks and Manalpuddi-aruanicuts ...	—	1,172 0	1,170 15	Usual upkeep
40	Diwulana and Tumpankeni tanks ...	—	1,119 0	1,115 77	do.
41	Chadayantalawa and Viragoda tanks ...	—	900 0	895 91	do.
42	Pullumalai tank	—	120 0	119 90	do.
43	Rugama tank	—	1,000 0	998 99	do.
44	Panama pattu works	—	1,760 0	1,759 62	do.
45	Pattipolai-aru scheme	—	3,535 0	3,521 83	do.
46	Sakamam works	—	1,345 0	1,344 0	do.
47	Illakkantai, Allai, and Peruveli tanks ...	—	1,320 0	1,319 50	do.
48	Andankulam and Periyakulam ...	—	1,030 0	1,030 0	do.
49	Kanthalai tank	—	1,050 0	987 79	do.
94	Hakgalawewa tank	—	33 0	33 0	do.
95	Maha-oya tank	—	114 0	114 0	do.
	Total ...	—	14,498 0	14,410 46	
	WESTERN PROVINCE.				
	Estimates sanctioned in 1902.				
	For upkeep—				
98	Four tanks at Ragama	—	200 0	200 0	Usual upkeep
112	Attidiya sluice	—	33 0	7 41	do.
148	Nikatu-ela sluice	—	136 0	105 18	do.
	Total ...	—	369 0	312 59	
	CENTRAL PROVINCE.				
	Estimates sanctioned in 1902.				
	For upkeep—				
75	Maha-ela	—	400 0	399 56	Usual upkeep
76	Waduwawala-ela	—	400 0	335 81	do.
77	Bodi-ela	—	400 0	398 71	do.
78	Lamasuriyagama and guardian's bungalow	—	350 0	271 15	do.
79	Barrack Plains reservoir		25 0	22 92	do.
103	Karawilabena tank	—	50 0	42 50	do.
104	Nadeniya amuna	—	20 0	18 13	do.

Estimate No.	Name of Work.	Balance brought forward.	Amount of Estimate.	Actual Expenditure during the Year.	Remarks.
		Rs. c.	Rs. c.	Rs. c.	
	For upkeep—				
105	Elahera head sluice	—	25 0	25 0	Usual upkeep
106	Village tank sluices	—	250 0	62 33	do.
107	Supervision over village tanks ...	—	375 0	268 43	do.
108	Weragahapelessa amuna	—	10 0	6 58	do.
109	Eraula tank	—	35 0	14 45	do.
110	Pelwehera tank	—	50 0	0 50	do.
122	Bodi-ela, Nuwara Eliya District ...	—	4 20	4 24	do.
151	Bowatenna channel	—	120 0	1 20	do.
152	Dambulla tank	—	10 0	0 10	do.
153	Nicol-oya Upper-ela	—	25 0	24 73	do.
154	Kurukulayage amuna	—	50 0	0 50	do.
	Total ...	—	2,599 20	1,896 80	
	NORTH-CENTRAL PROVINCE.				
	Estimates sanctioned in 1902.				
	For upkeep—				
37	Kalawewa scheme and Maha Illupallama ...	—	10,550 0	9,236 16	Usual upkeep
38	Tissawewa, Bassawakulam, and Nuwara-wewa, with channels	—	7,795 0	6,039 89	do.
50	Minneri tank	—	600 0	599 42	do.
51	Maha Madawachiya tank	—	180 0	115 70	do.
80	Talawe-ela anicut	—	200 0	55 65	do.
81	Village tanks	—	3,000 0	2,996 25	do.
97	Irrigation bungalows in the North-Central Province	—	250 0	250 0	do.
	Total ...	—	22,575 0	19,293 7	
	NORTH-WESTERN PROVINCE.				
	Estimates sanctioned in 1902.				
	For upkeep—				
21	Deduru-oya works	—	4,775 0	4,775 0	Usual upkeep
64	Kurunegala and Wenoruwewa tanks and Bu-ela, and channels connected therewith	—	1,750 0	1,749 91	do.
65	Kospotu-oya anicut	—	80 0	79 85	do.
66	Mediyawa and Galgomuwa tanks ...	—	858 0	857 85	do.
82	Paragoda anicut	—	35 0	0 70	do.
83	Medeketiya tank	—	300 0	297 14	do.
84	Magallawewa	—	1,100 0	1,099 66	do.
85	Maha Uswewa	—	660 0	659 58	do.
86	Tinipitiwewa	—	470 0	364 0	do.
87	Sluiced village tanks	—	1,000 0	533 32	do.
88	Irrigation bungalow at Nikaweratiya ...	—	160 0	155 16	do.
175	Deduru-oya works for 1902 (supplementary)	—	214 28	212 11	do.
	Total ...	—	11,402 28	10,784 28	
	PROVINCE OF UVA.				
	Estimates sanctioned in 1902.				
	For upkeep—				
22	Horaborawewa and Kudawewa ...	—	520 0	305 16	Usual upkeep
23	Sudupanawila and Hambegamuwa tanks ...	—	180 0	115 0	do.
24	Okkampitiya Yoda-ela and anicut ...	—	1,988 0	1,935 93	do.
25	Gal-oya anicut	—	120 0	120 0	do.
	Total ...	—	2,808 0	2,476 9	
	PROVINCE OF SABARAGAMUWA.				
	Estimates sanctioned in 1902.				
	For upkeep—				
28	Irrigation works at Kolonna korale ...	—	1,500 0	1,495 6	Usual upkeep
29	Do. Batugedara ...	—	260 0	260 0	do.
30	Do. Openake aqueduct ...	—	20 0	20 0	do.
31	Do. Kinchigune ...	—	180 0	180 0	do.
32	Do. Mulgama tank ...	—	50 0	49 75	do.
33	Do. Malwatta	—	165 0	164 95	do.
34	Do. Uggalkaltota ...	—	500 0	479 70	do.
35	Irrigation bungalows at Rajawaka, Tun-kame, Kaltota, and Panamure ...		480 0	480 0	do.
36	Rakwana-ganga irrigation works ...	—	500 0	255 0	do.
	Total ...	—	3,655 0	3,384 46	

Statement of Irrigation Surveys in Progress and undertaken during 1902.

Estimate No.	Name of Work.	Balance brought forward.	Amount of Estimate.	Actual Expenditure during the Year.	Remarks.
	NORTHERN PROVINCE.	Rs. c.	Rs. c.	Rs. c.	
	Estimates brought forward from 1901.				
4 of 1898	For surveys and levels at Giant's tank ...	1,519 79	—	—	—
24 of 1901	For surveys and levels at Pavatkulam ...	924 18	—	924 18	Completed
178	For surveys and levels at Vavunikkulam ...	1,176 58	—	1,176 58	The longitudinal section and cross sections of bund were completed, and a contour plan of the tank made
	Estimates sanctioned in 1902.				
128	Vavunikkulam: for continuing the surveys and levels	—	2,500 0	1,665 95*a*	Section lines were commenced for contouring irrigable land
143	For the survey of Akattimurippu tank ...	—	1,800 0	660 45*a*	898 ft. jungle cut, 2,218 ft. pegged and chained, 3,181 ft. levelled, 637 angles taken, all work plotted
	Total ...	3,620 55	4,300 0	4,427 16	
	SOUTHERN PROVINCE.				
	Estimates brought forward from 1901.				
241 of 1898	For surveys and levels at Tissa ...	377 40	—	375 80	Cutting lines, surveying, and levelling
225 of 1901	For completing the surveys of Magam pattu channel	379 25	—	379 14*a*	do.
	Estimates sanctioned in 1902.				
99	Magam pattu channel: for completing the surveys of the proposed Magam pattu channel	—	500 0	440 40*a*	do.
126	Kirinde-oya surveys: for surveys and levels	—	3,000 0	1,846 39*a*	do.
70	Minor surveys (Rs. 4,000): Jansegama swamps	—	46 50	46 50*a*	—
	Total ...	756 65	3,546 50	3,088 23	
	EASTERN PROVINCE.				
	Estimates brought forward from 1901.				
227 of 1896	For survey of sites for bund and spill at Kondavaddavan	240 0	—	239 10	Survey of channels, &c. completed
14 of 1901	For surveys and levels in Panama pattu ...	69 52	—	66 15	Completed
30	Do. do. ...	480 0	—	463 50	do.
	Estimates sanctioned in 1902.				
68	Pulugannawa and Kadukamunai tanks: for surveys and levels	—	312 50	311 77*a*	Completed
70	Minor surveys (Rs. 4,000):—				
	Pattipolai-aar extension	—	71 70	71 70*a*	—
	Kondavaddavan	—	286 25	286 25*a*	—
	Andankulam	—	24 75	24 75*a*	—
	Minor surveys	—	244 40	244 40*a*	—
	Do.	—	8 0	8 0*a*	—
	Total ...	789 52	947 60	1,715 62	
	CENTRAL PROVINCE.				
	Estimates brought forward from 1901.				
157 of 1897	For survey of site of Bowatenna channel anicut	134 50	—	—	—
212 of 1897	For survey of Dorawilagala and Loluwela scheme	520 74	—	134 70	Surveys charge
70	Minor surveys (Rs. 4,000):—				
	Amunuwala amuna	—	7 72	7 72*a*	—
	Udugoda Banwela	—	36 90	36 90*a*	—
	Moragala Mahawewa	—	28 80	28 80*a*	—
	Total ...	655 24	73 42	208 12	

a The cost of these surveys were charged to "Construction Vote."

Estimate No.	Name of Work.	Balance brought forward.	Amount of Estimate.	Actual Expenditure during the Year.	Remarks.
		Rs. c.	Rs. c.	Rs. c.	
	NORTH-CENTRAL PROVINCE.				
	Estimates brought forward from 1901.				
5 of 1901	For survey of Mahagalkadawala tank ...	135 68	—	135 67	6,465 chains cleared, 8,063 chains levelled and surveyed, 1,946 angles taken, &c.
22 of 1901	For surveys and levels at Dambutuluwewa ...	1,000 7	—		—
65 of 1901	For surveys of Nachchaduwa and Nuwarawewa	71 18	—	—	—
185 of 1901	For survey of Nachchaduwa (supplementary)	1,495 63	—	1,431 32	In progress
	Estimates sanctioned in 1902.				
8	Surveys at Mahagalkadawala and Mahakanadarawa	—	5,000 0	4,871 28	Completed
70	Minor surveys (Rs. 4,000): repairing levels	—	45 0	45 0*a*	—
	Total ...	2,702 56	5,045 0	6,483 27	
	NORTH-WESTERN PROVINCE.				
	Estimates brought forward from 1901.				
168 of 1900	For surveys of irrigation works near the Northern Railway	5,244 7	—	5,243 16	Completed
191 of 1901	For surveys and levels at Tinapitiya tank ...	277 55	—	180 12	—
	Estimates sanctioned in 1902.				
4	Pandawewa: for a survey of the irrigable land	—	2,575 0	1,827 99	2,055 acres irrigable land contoured. Work stopped because officers were required for village tank work
70	Minor surveys (Rs. 4,000): rail fare, &c. ...	—	7 66	7 66*a*	—
	Do. do.	—	42 0	42 0*a*	—
	Total ...	5,521 62	2,624 66	7,300 93	
	PROVINCE OF UVA.				
	Estimates sanctioned in 1902.				
157	For the survey of a proposed tank at Mackerakatti	—	2,000 0	712 43*a*	—
170	For the survey of Etimolawewa ...	—	1,500 0	45 0*a*	—
70	Minor surveys (Rs. 4,000): Alut-ela ...	—	20 75	20 75*a*	—
	Do. Wahugoruwewa	—	37 15	37 15*a*	—
	Total ...	—	3,557 90	815 33	
	PROVINCE OF SABARAGAMUWA.				
	Nil.				

a The cost of these surveys were charged to "Construction Vote."

Statement of Salaries, &c., paid on Estimates during 1902.

Estimate No.	Name of Work.	Balance brought forward.	Amount of Estimate.	Actual Expenditure during the Year.	Remarks.
	HEADQUARTERS.	Rs. c.	Rs. c.	Rs. c.	
	Estimates brought forward from 1901.				
202 of 1901	For pay of temporary draughtsmen ...	957 22	—	333 0	
237 of 1901	For travelling allowances and expenses ...	260 27	—	253 65	
	Estimates sanctioned in 1902.				
72	For allowance of Irrigation Officers during 1902	—	5,220 0	1,467 97	
73	For travelling allowances and expenses, 1902	—	10,000 0	10,000 0	
115	For paying a special allowance to Messrs. Balfour and Hilton, Irrigation Engineers...	—	727 50	727 50	
147	For paying a special allowance to Mr. C. D. Watts	—	225 0	225 0	
149	For paying a special allowance to Mr. F. E. Hilton	—	300 0	300 0	
169	For paying a special allowance to Mr. Bowden	—	495 0	495 0	
173	For paying a special allowance to Messrs. Gordon and O'Brien, Irrigation Engineers...	—	165 0	165 0	
179	For the payment of travelling expenses to Irrigation Officers (supplementary) ...	—	500 0	500 0	
	Total ...	1,217 49	17,632 50	14,467 12	
	NORTHERN PROVINCE.				
	Estimates sanctioned in 1902.				
72	For allowance of Irrigation Officers during 1902	—	5,496 0	5,447 80	
	Total ...	—	5,496 0	5,447 80	
	SOUTHERN PROVINCE.				
	Estimates sanctioned in 1902.				
71	For salaries of Irrigation Officers during 1902	—	840 0	379 35	
72	For allowance of Irrigation Officers during 1902	—	4,620 0	2,948 55	
125	For paying an additional commuted allowance to the Irrigation Inspector, S. P., during 1902	—	70 0	65 0	
	Total ...	—	5,530 0	3,392 90	
	EASTERN PROVINCE.				
	Estimates sanctioned in 1902.				
71	For salaries of Irrigation Officers during 1902	—	120 0	30 0	
72	For allowance of Irrigation Officers during 1902	—	8,580 0	7,055 68	
	Total ...	—	8,700 0	7,085 68	
	WESTERN PROVINCE.				
	Estimates sanctioned in 1902.				
	Nil.				
	CENTRAL PROVINCE.				
	Estimates sanctioned in 1902.				
71	For salaries of Irrigation Officers during 1902	—	840 0	668 38	
72	For allowance of Irrigation Officers during 1902	—	1,320 0	801 29	
	Total ...	—	2,160 0	1,469 67	
	NORTH-CENTRAL PROVINCE.				
	Estimates sanctioned in 1902.				
72	For allowance of Irrigation Officers during 1902	—	8,970 0	7,409 98	
	Total ...	—	8,970 0	7,409 98	

Estimate No.	Name of Work.	Balance brought forward.	Amount of Estimate.	Actual Expenditure during the Year.	Remarks.
	NORTH-WESTERN PROVINCE.	Rs. c.	Rs. c.	Rs. c.	
	Estimates sanctioned in 1902.				
71	For salaries of Irrigation Officers during 1902	—	240 0	240 0	
72	For allowance of Irrigation Officers during 1902	—	5,592 0	5,272 81	
127	For additional commuted allowance to Mr. Emerson during 1902	—	210 0	210 0	
	Total ...	—	6,042 0	5,722 81	
	PROVINCE OF UVA.				
	Estimates sanctioned in 1902.				
71	For salaries of Irrigation Officers during 1902	—	750 0	750 0	
72	For allowance of Irrigation Officers during 1902	—	740 0	739 93	
	Total ...	—	1,490 0	1,489 93	
	PROVINCE OF SABARAGAMUWA.				
	Estimates sanctioned in 1902.				
72	For allowance of Irrigation Officers during 1902	—	360 0	360 0	
	Total ...	—	360 0	360 0	

APPENDIX G.

MAINTENANCE OF WORKS DURING 1902.

	1900.		1901.		1902.	
	Rs. c.	Rate per Mile. Rs. c.	Rs. c.	Rate per Mile. Rs. c.	Rs. c.	Rate per Mile. Rs. c.
GIANT'S TANK, NORTHERN PROVINCE.						
General Charges.						
Pay and allowance of guardians ...	— ...	— ...	— ...	— ...	825 0 ...	—
Repair of buildings ...	18 0 ...	— ...	149 93 ...	— ...	90 13 ...	—
Repair of roads ...	— ...	— ...	— ...	— ...	2 50 ...	—
Issue of water ...	— ...	— ...	— ...	— ...	92 75 ...	—
Planting trees ...	— ...	— ...	— ...	— ...	— ...	—
Transport charges ...	25 50 ...	— ...	121 0 ...	— ...	99 0 ...	—
Contingencies ...	44 50 ...	— ...	47 0 ...	— ...	61 27 ...	—
Channels.						
Clearing jungle and weeding ...	263 49 ...	40 53 ...	171 90 ...	26 44 ...	530 75 ...	—
Removal of silt ...	75 50 ...	— ...	— ...	— ...	138 80 ...	—
Upkeep of channels and bunds ...	150 75 ...	23 19 ...	837 38 ...	167 48 ...	1,246 66 ...	—
Upkeep and masonry and bridges ...	7 50 ...	— ...	172 75 ...	— ...	212 70 ...	—
	585 24		1,499 96		3,299 56	
KANUKKENI TANK, NORTHERN PROVINCE.						
General Charges.						
Pay of guardian ...	— ...	— ...	— ...	— ...	— ...	—
Repair of buildings ...	46 90 ...	— ...	— ...	— ...	42 0 ...	—
Repair of roads ...	— ...	— ...	— ...	— ...	45 2 ...	—
Issue of water ...	— ...	— ...	— ...	— ...	— ...	—
Planting trees ...	— ...	— ...	— ...	— ...	— ...	—
Transport charges ...	18 0 ...	— ...	18 0 ...	— ...	21 0 ...	—
Contingencies ...	94 19 ...	— ...	— ...	— ...	— ...	—
Channels.						
Clearing jungle and weeding ($10\frac{7}{8}$ miles)	51 62 ...	13 76 ...	104 70 ...	15 51 ...	146 8 ...	13 43
Removal of silt ...	— ...	— ...	— ...	— ...	— ...	—
Upkeep of channels and bund ($10\frac{7}{8}$ miles)	389 26 ...	103 80 ...	467 18 ...	68 47 ...	299 19 ...	27 51
Upkeep of masonry and bridges ...	— ...	— ...	10 0 ...	— ...	42 98 ...	—
	599 97		599 88		596 27	
PERIYAKULAM TANK, NORTHERN PROVINCE.						
General Charges.						
Pay of guardian ...	— ...	— ...	— ...	— ...	— ...	—
Repair of buildings ...	— ...	— ...	— ...	— ...	— ...	—
Repair of roads ...	— ...	— ...	— ...	— ...	— ...	—
Issue of water ...	— ...	— ...	— ...	— ...	— ...	—
Planting trees ...	— ...	— ...	— ...	— ...	— ...	—
Transport charges ...	6 0 ...	— ...	10 0 ...	— ...	6 0 ...	—
Contingencies ...	4 20 ...	— ...	— ...	— ...	— ...	—
Channels.						
Clearing jungle and weeding ($1\frac{1}{4}$ mile) ...	— ...	— ...	11 0 ...	8 80 ...	60 9 ...	48 7
Removal of silt ...	15 2 ...	24 4 ...	— ...	— ...	— ...	—
Upkeep of channels and bunds ($1\frac{1}{4}$ mile)	144 64 ...	115 71 ...	178 90 ...	143 12 ...	92 75 ...	74 20
Upkeep of masonry and bridges ...	— ...	— ...	— ...	— ...	35 14 ...	—
Total ...	199 95		199 90		193 98	
KIRINDE-OYA WORKS, SOUTHERN PROVINCE.						
General Charges.						
Pay of guardian ...	628 38 ...	— ...	720 0 ...	— ...	780 0 ...	—
Repair of buildings ...	86 75 ...	— ...	193 0 ...	— ...	90 2 ...	—
Repair of roads (6 miles) ...	8 0 ...	1 33 ...	42 0 ...	7 0 ...	56 40 ...	9 40
Issue of water ...	198 86 ...	— ...	154 80 ...	— ...	139 20 ...	—
Planting trees ...	— ...	— ...	— ...	— ...	— ...	—
Transport charges ...	79 90 ...	— ...	62 2 ...	— ...	51 0 ...	—
Contingencies ...	21 30 ...	— ...	138 20 ...	— ...	144 35 ...	—

	1900. Rs. c.	1900. Rate per Mile. Rs. c.	1901. Rs. c.	1901. Rate per Mile. Rs. c.	1902. Rs. c.	1902. Rate per Mile. Rs. c.
Channels.						
Clearing jungle and weeding (27 miles)	524 60	19 69	344 40	12 76	480 60	17 80
Removal of silt (21 miles)	149 8	7 10	485 20	23 10	459 62	21 89
Upkeep of channels and bunds (27 miles)	654 85	24 25	316 30	11 71	322 65	11 98
Upkeep of masonry and bridges	—	—	—	—	6 6	—
Total	2,654 17		2,550 0		2,530 0	
WALAWE-GANGA WORKS, SOUTHERN PROVINCE.						
General Charges.						
Pay and allowance of guardian	618 86	—	845 0	—	828 75	—
Repair of buildings	193 38	—	171 66	—	164 35	—
Repairs of roads (10 miles)	4 80	—	91 22	9 12	3 0	0 30
Issue of water	560 20	—	757 20	—	742 60	—
Planting trees	—	—	—	—	—	—
Transport charges	118 90	—	104 90	—	138 15	—
Contingencies	4 72	—	51 12	—	171 30	—
Channels.						
Clearing jungle and weeding (28 miles)	939 35	39 14	929 27	33 19	1,145 52	40 91
Removal of silt (18 miles)	1,740 95	72 54	1,300 65	72 26	846 90	47 5
Upkeep of channels and bunds (28 miles)	400 52	16 69	266 90	9 53	181 21	6 47
Upkeep of masonry and bridges	37 84	—	79 71	—	357 72	
Total	4,619 52		4,597 63		4,579 50	
DANDENIYA TANK, SOUTHERN PROVINCE.						
General Charges.						
Pay of guardian	—	—	324 19	—	298 78	—
Repair of buildings	—	—	32 37	—	11 40	—
Repair of roads	—	—	27 30	—	54 45	—
Issue of water	—	—	1 20	—	4 20	—
Planting trees	—	—	—	—	—	—
Transport charges	—	—	18 50	—	24 50	—
Contingencies	—	—	10 20	—	28 95	—
Channels.						
Clearing jungle and weeding (3½ miles)	—	—	160 5	45 73	245 60	70 17
Removal of silt (3½ miles)	—	—	214 80	61 37	71 0	20 28
Upkeep of channels and bunds (3½ miles)	—	—	61 20	17 48	90 90	25 97
Upkeep of masonry and bridges	—	—	—	—	9 0	—
Total	—		849 81		838 78	
URUBOKKA, SOUTHERN PROVINCE.						
General Charges.						
Pay of guardian	—	—	336 0	—	336 0	—
Repairs of buildings	—	—	—	—	—	—
Repair of roads	—	—	—	—	—	—
Issue of water	—	—	—	—	—	—
Planting trees	—	—	—	—	—	—
Transport charges	—	—	17 0	—	17 0	—
Contingencies	—	—	—	—	79 50	—
Channels.						
Clearing jungle and weeding (2 miles)	—	—	122 75	61 37	41 40	20 70
Removal of silt (2 miles)	—	—	31 70	15 85	—	—
Upkeep of channels and bunds (2 miles)	—	—	145 85	72 92	248 85	124 42
Upkeep of masonry and bridges	—	—	21 0	—	2 10	—
Total	—		674 30		724 85	

	1900. Rs. c.	1900. Rate per Mile, Rs. c.	1901. Rs. c.	1901. Rate per Mile. Rs. c.	1902. Rs. c.	1902. Rate per Mile. Rs. c.
KEKENADURA TANK, SOUTHERN PROVINCE.						
General Charges.						
Pay of guardian ...	—	—	260 0	—	230 0	—
Repair of buildings ...	—	—	23 15	—	83 0	—
Repair of roads ...	—	—	141 24	—	76 50	—
Issue of water ...	—	—	4 0	—	2 40	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	—	—	20 0	—	37 50	—
Contingencies ...	—	—	4 56	—	14 90	—
Channels.						
Clearing jungle and weeding (7½ miles)	—	—	198 33	26 44	245 70	32 76
Removal of silt (7⅜ miles) ...	—	—	37 90	5 14	5 40	0 73
Upkeep of channels and bunds (7½ miles)	—	—	291 0	38 80	170 20	22 69
Upkeep of masonry and bridges ...	—	—	19 80	—	129 65	—
			999 98		995 25	
HALI-ELA TANK, SAPUGODA ANICUT, ELLAWALA TANK, URAPOLA ANICUT, PETTERA ANICUT, ALAWATUGODA ANICUT, HOMARAGODA ANICUT, SOUTHERN PROVINCE.						
General Charges.						
Pay of guardians ...	—	—	1,129 21	—	896 70	—
Repair of buildings ...	—	—	56 45	—	114 96	—
Repair of roads ...	—	—	239 40	—	402 20	—
Issue of water ...	—	—	125 10	—	138 75	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	—	—	94 25	—	88 30	—
Contingencies ...	—	—	152 50	—	49 12	—
Channels.						
Clearing jungle and weeding (13¾ miles)	—	—	610 50	44 40	597 75	43 47
Removal of silt (13⅜ miles) ...	—	—	321 66	24 5	160 98	11 71
Upkeep of channels and bunds (13¾ miles) ...	—	—	409 76	29 80	593 15	43 14
Upkeep of masonry and bridges ...	—	—	457 35	—	748 51	—
			3,596 18		3,790 42	
DENAGAMA AND UYANWEWA TANKS, SOUTHERN PROVINCE.						
General Charges.						
Pay of guardian ...	—	—	325 0	—	300 0	—
Repair of buildings ...	—	—	—	—	19 69	—
Repair of roads ...	—	—	50 0	—	—	—
Issue of water ...	—	—	—	—	3 85	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	—	—	15 62	—	23 2	—
Contingencies ...	—	—	24 32	—	15 10	—
Channels.						
Clearing jungle and weeding (⅝ mile) ...	—	—	225 15	360 24	176 90	110 56
Removal of silt (1/16 mile) ...	—	—	1 80	28 80	1 50	0 9
Upkeep of channel and bunds (⅜ mile)	—	—	75 60	120 96	230 94	144 34
Upkeep of masonry and bridges ...	—	—	42 55	—	—	—
			760 4		771 0	
UDUKIRIWILA TANK, SOUTHERN PROVINCE.						
General Charges.						
Pay of guardian ...	—	—	110 0	—	297 50	—
Repair of buildings ...	—	—	54 70	—	137 3	—
Repair of roads ...	—	—	61 35	—	0 80	—
Issue of water ...	—	—	19 60	—	70 68	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	—	—	28 80	—	98 20	—
Contingencies ...	—	—	25 0	—	70 60	—

Channels.	1900. Rs. c.	1900. Rate per Mile. Rs. c.	1901. Rs. c.	1901. Rate per Mile. Rs. c.	1902. Rs. c.	1902. Rate per Mile. Rs. c.
Clearing jungle and weeding (3¼ miles)	—	—	282 70	86 98	225 57	69 41
Removal of silt (2¾ miles)	—	—	306 49	111 45	32 64	11 87
Upkeep of channels and bunds (3¼ miles)	—	—	204 68	62 98	91 42	28 13
Upkeep of masonry and bridges	—	—	6 0	—	306 50	—
			1,399 32		1,330 94	
KIRAMA TANK, SOUTHERN PROVINCE.						
General Charges.						
Pay of guardian	—	—	520 0	—	480 0	—
Repair of buildings	—	—	34 70	—	22 15	—
Repair of roads	—	—	78 55	—	153 75	—
Issue of water	—	—	10 65	—	12 0	—
Planting trees	—	—	—	—	—	—
Transport charges	—	—	25 20	—	36 20	—
Contingencies	—	—	20 5	—	4 25	—
Channels.						
Clearing jungle and weeding (1⅞ mile)	—	—	177 30	94 56	211 75	112 93
Removal of silt (1¾ mile)	—	—	121 20	69 26	9 0	5 14
Upkeep of channels and bunds (1⅞ mile)	—	—	189 33	100 98	117 5	62 43
Upkeep of masonry and bridges	—	—	2 40	—	212 45	—
			1,179 38		1,258 60	
DEDDUWA TANK, SOUTHERN PROVINCE.						
General Charges.						
Pay of guardian	—	—	270 83	—	249 96	—
Repair of buildings	—	—	—	—	—	—
Repair of roads	—	—	9 48	—	—	—
Issue of water	—	—	170 0	—	95 50	—
Planting trees	—	—	—	—	—	—
Transport charges	—	—	19 78	—	20 88	—
Contingencies	—	—	47 98	—	55 85	—
Channels.						
Clearing jungle and weeding (1⅜ mile)	—	—	36 10	26 25	39 75	28 91
Removal of silt (1¼ mile)	—	—	—	—	—	—
Upkeep of channels and bunds (1⅜ mile)	—	—	5 0	3 64	63 85	46 44
Upkeep of masonry and bridges	—	—	85 13	—	42 75	—
			644 30		568 54	
WAGGALMODARA FLOOD OUTLET, SOUTHERN PROVINCE.						
General Charges.						
Pay of guardian	—	—	156 0	—	132 0	—
Repair of buildings	—	—	—	—	—	—
Repair of roads	—	—	—	—	—	—
Issue of water	—	—	180 0	—	112 50	—
Planting trees	—	—	—	—	—	—
Transport charges	—	—	8 26	—	10 26	—
Contingencies	—	—	15 50	—	25 50	—
Channels.						
Clearing jungle and weeding	—	—	—	—	—	—
Removal of silt	—	—	—	—	—	—
Upkeep of channels and bunds	—	—	—	—	—	—
Upkeep of masonry and bridges	—	—	15 0	—	128 0	—
			374 76		408 26	

Channels.	1900. Rs. c.	1900. Rate per Mile. Rs. c.	1901. Rs. c.	1901. Rate per Mile. Rs. c.	1902. Rs. c.	1902. Rate per Mile. Rs. c.
PATTIPOLAI-ARU SCHEME, EASTERN PROVINCE.						
General Charges.						
Pay of guardian ...	880 94	—	1,034 64	—	1,232 64	—
Repair of buildings ...	641 94	—	522 93	—	335 66	—
Repair of roads (6 miles) ...	192 43	3 37	234 69	39 11	218 7	36 34
Issue of water ...	77 52	—	116 93	—	226 83	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	226 15	—	199 40	—	169 90	—
Contingencies ...	201 69	—	83 11	—	105 8	—
Channels.						
Clearing jungle and weeding (12 miles) ...	217 24	18 10	321 32	26 78	323 42	26 95
Removal of silt ...	20 41	—	10 0	—	77 83	—
Upkeep of channels and bunds (12 miles) ...	565 93	47 16	624 80	52 7	386 28	32 19
Upkeep of masonry and bridges ...	509 53	—	384 20	—	446 12	—
	3,533 78		3,532 2		3,521 83	
SAKAMAM WORKS, EASTERN PROVINCE.						
General Charges.						
Pay of guardian ...	175 0	—	324 98	—	299 99	—
Repair of buildings ...	222 62	—	293 85	—	160 44	—
Repair of roads (6 miles) ...	45 69	8 12	13 85	2 31	52 46	8 74
Issue of water ...	17 35	—	24 97	—	25 36	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	65 55	—	112 55	—	67 87	—
Contingencies ...	160 28	—	29 84	—	38 93	—
Channels.						
Clearing jungle and weeding (8¾ miles) ...	181 9	27 86	124 62	14 24	162 74	18 60
Removal of silt ...	2 4	—	9 0	—	7 92	—
Upkeep of channels and bunds (11⅜ miles) ...	405 58	62 40	266 54	23 43	363 31	31 94
Upkeep of masonry and bridges ...	69 77	—	144 32	—	164 98	—
	1,344 97		1,344 52		1,344 0	
PANAMA PATTU' WORKS, EASTERN PROVINCE.						
General Charges.						
Pay of guardian ...	—	—	306 22	—	390 0	—
Repair of buildings ...	—	—	354 36	—	372 79	—
Repair of roads (3⅜ miles) ...	—	—	208 6	53 69	168 33	43 44
Issue of water ...	—	—	2 31	—	3 24	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	—	—	126 90	—	73 40	—
Contingencies ...	—	—	91 69	—	90 10	—
Channels.						
Clearing jungle and weeding (2¾ miles) ...	—	—	104 87	38 13	32 78	11 92
Removal of silt ...	—	—	4 50	—	5 78	—
Upkeep of channels and bunds (17⅞ miles) ...	—	—	409 79	23 25	453 1	25 70
Upkeep of masonry and bridges ...	—	—	151 3	—	170 19	—
			1,759 73		1,759 62	
PERUVELI TANK, EASTERN PROVINCE.						
General Charges.						
Pay of guardian ...	—	—	—	—	—	—
Repair of buildings ...	—	—	—	—	—	—
Repair of roads ...	—	—	—	—	—	—
Issue of water ...	—	—	—	—	—	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	—	—	8 0	—	8 0	—
Contingencies ...	—	—	—	—	6 46	—

	1900.		1901.		1902.	
	Rs. c.	Rate per Mile. Rs. c.	Rs. c.	Rate per Mile. Rs. c.	Rs. c.	Rate per Mile. Rs. c.
Channels.						
Clearing jungle and weeding ...	—	—	—	—	—	—
Removal of silt ...	—	—	—	—	—	—
Upkeep of channels and bunds (2⅜ miles)	—	—	36 10	15 20	78 0	31 79
Upkeep of masonry and bridges ...	—	—	—	—	36 42	—
			44 10		128 88	
PERIYAKULAM, EASTERN PROVINCE.						
General Charges.						
Pay of guardian ...	—	—	125 0	—	104 16	—
Repair of buildings ...	—	—	70 49	—	29 52	—
Repair of roads ...	—	—	—	—	—	—
Issue of water ...	—	—	—	—	7 82	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	—	—	22 40	—	22 40	—
Contingencies ...	—	—	—	—	21 96	—
Channels.						
Clearing jungle and weeding (4½ miles)	—	—	139 40	30 98	—	—
Removal of silt (2 miles) ...	—	—	19 18	9 59	—	—
Upkeep of channels and bunds (4 miles)	—	—	120 48	30 12	241 7	60 29
Upkeep of masonry and bridges ...	—	—	62 14	—	45 8	—
			559 9		472 1	
ANDANKULAM, EASTERN PROVINCE.						
General Charges.						
Pay of guardian ...	—	—	125 0	—	104 13	—
Repair of buildings ...	—	—	44 72	—	—	—
Repair of roads ...	—	—	—	—	51 0	—
Issue of water ...	—	—	—	—	19 92	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	—	—	18 80	—	18 80	—
Contingencies ...	—	—	—	—	24 65	—
Channels.						
Clearing jungle and weeding ...	—	—	99 49	33 16	—	—
Removal of silt ...	—	—	25 36	6 34	—	—
Upkeep of channels and bunds (5¼ miles)	—	—	72 40	12 7	313 41	59 70
Upkeep of masonry and bridges ...	—	—	82 38	—	26 8	—
			468 15		557 99	
ALLAI TANK, EASTERN PROVINCE.						
General Charges.						
Pay of guardian ...	—	—	360 0	—	360 0	—
Repair of buildings ...	—	—	160 14	—	26 87	—
Repair of roads ...	—	—	—	—	—	—
Issue of water ...	—	—	—	—	47 52	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	—	—	38 0	—	38 0	—
Contingencies ...	—	—	—	—	68 59	—
Channels.						
Clearing jungle and weeding ...	—	—	137 38	20 35	—	—
Removal of silt ...	—	—	12 8	2 30	—	—
Upkeep of channels and bunds (5¼ miles)	—	—	139 4	26 48	370 67	70 60
Upkeep of masonry and bridges ...	—	—	103 27	—	154 74	—
			949 91		1,066 39	

	1900. Rs. c.	1900. Rate per Mile. Rs. c.	1901. Rs. c.	1901. Rate per Mile. Rs. c.	1902. Rs. c.	1902. Rate per Mile. Rs. c.
KANTALAY TANK, EASTERN PROVINCE.						
General Charges.						
Pay of guardian ...	360 0	—	360 0	—	360 0	—
Repair of buildings ...	40 48	—	—	—	97 52	—
Repair of roads ...	—	—	—	—	—	—
Issue of water ...	—	—	22 60	—	6 66	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	78 0	—	42 0	—	42 0	—
Contingencies ...	51 92	—	39 46	—	22 51	—
Channels.						
Clearing jungle and weeding (5 miles)...	108 0	21 60	188 92	37 60	33 54	6 71
Removal of silt (3 miles) ...	—	—	62 40	20 80	41 22	13 73
Upkeep of channels and bunds (4¼ miles)	216 76	51 2	236 90	55 74	341 35	94 95
Upkeep of masonry and bridges ...	199 22	—	96 80	—	42 99	—
	1,054 38		1,049 8		987 79	
ILAKKANTAI TANK, EASTERN PROVINCE.						
General Charges.						
Pay of guardian ...	—	—	—	—	—	—
Repair of buildings ...	—	—	—	—	5 4	—
Repair of roads ...	—	—	13 61	—	—	—
Issue of water ...	—	—	—	—	2 16	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	—	—	6 80	—	6 80	—
Contingencies ...	—	—	—	—	3 24	—
Channels.						
Clearing jungle and weeding ...	—	—	60 42	16 67	—	—
Removal of silt ...	—	—	—	—	—	—
Upkeep of channels and bunds (5 miles)	—	—	67 36	13 47	105 19	21 4
Upkeep of masonry and bridges ...	—	—	21 62	—	1 80	—
			169 81		124 23	
VIRAGODA TANK, EASTERN PROVINCE.						
General Charges.						
Pay of guardian ...	—	—	—	—	114 9	—
Repair of buildings ...	—	—	45 23	—	36 66	—
Repair of roads (7 miles) ...	—	—	15 69	3 14	21 24	3 3
Issue of water ...	—	—	4 75	—	5 35	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	—	—	10 80	—	15 77	—
Contingencies ...	—	—	1 80	—	11 2	—
Channels.						
Clearing jungle and weeding (4½ miles)	—	—	94 0	47 0	91 87	40 83
Removal of silt ...	—	—	4 0	—	4 32	—
Upkeep of channels and bunds (3¾ miles)	—	—	85 73	42 86	77 30	21 61
Upkeep of masonry and bridges ...	—	—	1 75	—	9 71	—
			263 75		387 33	
CHADAYANTALAWA TANK, EASTERN PROVINCE.						
General Charges.						
Pay of guardian ...	—	—	261 4	—	135 87	—
Repair of buildings ...	—	—	78 30	—	73 62	—
Repair of roads (15½ miles) ...	—	—	31 41	5 24	43 72	2 82
Issue of water ...	—	—	5 50	—	4 32	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	—	—	25 20	—	20 23	—
Contingencies ...	—	—	51 12	—	26 68	—

	1900.		1901.		1902.	
	Rs. c.	Rate per Mile. Rs. c.	Rs. c.	Rate per Mile. Rs. c.	Rs. c.	Rate per Mile. Rs. c.
Channels.						
Clearing jungle and weeding (3⅔ miles)	—	—	65 20	43 47	77 90	21 25
Removal of silt	—	—	4 0	—	9 90	—
Upkeep of channels and bunds (3⅔ miles)	—	—	98 47	65 65	97 67	26 64
Upkeep of masonry and bridges	—	—	5 94	—	18 67	—
			626 18		508 58	
TUMPANKENI TANK, EASTERN PROVINCE.						
General Charges.						
Pay of guardian	—	—	45 48	—	165 0	—
Repair of buildings	—	—	48 50	—	59 2	—
Repair of roads (22 miles)	—	—	49 8	4 91	82 40	3 75
Issue of water	—	—	5 4	—	5 85	—
Planting trees	—	—	—	—	—	—
Transport charges	—	—	13 4	—	22 47	—
Contingencies	—	—	3 50	—	16 53	—
Channels.						
Clearing jungle and weeding (2½ miles)	—	—	51 0	14 57	37 85	15 14
Removal of silt	—	—	16 8	8 4	24 48	—
Upkeep of channels and bunds (5¾ miles)	—	—	67 94	19 41	130 94	22 77
Upkeep of masonry and bridges	—	—	24 0	—	15 90	—
			323 66		560 44	
DIWULANA TANK, EASTERN PROVINCE.						
General Charges.						
Pay of guardian	—	—	330 0	—	195 0	—
Repair of buildings	—	—	85 64	—	29 20	—
Repair of roads (24 miles)	—	—	59 40	3 71	64 16	2 67
Issue of water	—	—	6 20	—	5 30	—
Planting trees	—	—	—	—	—	—
Transport charges	—	—	31 72	—	33 83	—
Contingencies	—	—	32 62	—	26 79	—
Channels.						
Clearing jungle and weeding (3¾ miles)	—	—	99 81	33 27	85 44	23 30
Removal of silt	—	—	6 50	—	9 92	—
Upkeep of channels and bunds (2½ miles)	—	—	65 70	21 90	69 80	27 92
Upkeep of masonry and bridges	—	—	70 7	—	35 89	—
			787 66		555 33	
MANALPUDDI-ARU ANICUT, EASTERN PROVINCE.						
General Charges.						
Pay of guardian	—	—	60 0	—	98 0	—
Repair of buildings	—	—	40 86	—	26 63	—
Repairs of roads	—	—	17 7	5 69	41 8	—
Issue of water	—	—	7 10	—	9 92	—
Planting trees	—	—	—	—	—	—
Transport charges	—	—	15 28	—	22 56	—
Contingencies	—	—	7 0	—	14 37	—
Channels.						
Clearing jungle and weeding (5¾ miles)	—	—	61 84	12 37	48 92	8 51
Removal of silt	—	—	10 30	4 12	19 13	—
Upkeep of channels and bunds (7½ miles)	—	—	80 6	16 1	101 8	13 58
Upkeep of masonry and bridges	—	—	80 30	—	20 50	—
			379 81		402 99	

	1900.		1901.		1902.	
	Rs. c.	Rate per Mile. Rs. c.	Rs. c.	Rate per Mile. Rs. c.	Rs. c.	Rate per Mile. Rs. c.
PULUGANNAWA TANK, EASTERN PROVINCE.						
General Charges.						
Pay of guardian ...	—	—	158 50	—	104 0	—
Repair of buildings ...	—	—	50 22	—	60 98	—
Repair of roads (8 miles) ...	—	—	33 78	3 38	30 20	3 78
Issue of water ...	—	—	6 22	—	9 80	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	—	—	18 4	—	15 62	—
Contingencies ...	—	—	1 0	—	14 40	—
Channels ...	—	—	—	—	—	—
Clearing jungle and weeding (2¾ miles) ...	—	—	69 35	34 67	56 7	20 39
Removal of silt ...	—	—	17 16	—	1 80	—
Upkeep of channels and bunds (2⅔ miles) ...	—	—	74 54	37 27	83 60	31 35
Upkeep of masonry and bridges ...	—	—	20 65	—	13 83	—
			449 46		390 30	
KADUKKAMUNAI TANK, EASTERN PROVINCE.						
General Charges.						
Pay of guardian ...	—	—	94 40	—	98 0	—
Repair of buildings ...	—	—	35 0	—	32 32	—
Repair of roads (4½ miles ...	—	—	8 50	5 67	19 14	4 25
Issue of water ...	—	—	5 76	—	6 60	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	—	—	13 56	—	15 14	—
Contingencies ...	—	—	6 0	—	18 4	—
Channels ...	—	—	—	—	—	—
Clearing jungle and weeding (6½ miles) ...	—	—	48 30	16 10	87 94	13 53
Removal of silt ...	—	—	19 23	25 64	16 96	—
Upkeep of channels and bunds (5 miles) ...	—	—	102 14	22 70	61 23	12 25
Upkeep of masonry and bridges ...	—	—	4 89	—	21 49	—
			337 78		376 86	
PULLUMALAI TANK, EASTERN PROVINCE.						
General Charges.						
Pay of guardian ...	—	—	—	—	105 60	—
Repair of buildings ...	—	—	—	—	—	—
Repair of roads ...	—	—	—	—	—	—
Issue of water ...	—	—	—	—	—	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	—	—	—	—	4 80	—
Contingencies ...	—	—	—	—	—	—
Channels.						
Clearing jungle and weeding ...	—	—	—	—	—	—
Removal of silt ...	—	—	—	—	—	—
Upkeep of channels and bunds ...	—	—	—	—	—	—
Upkeep of masonry and bridges ...	—	—	—	—	9 50	—
					119 90	
RUGAMA TANK, EASTERN PROVINCE.						
General Charges.						
Pay of guardian ...	—	—	—	—	360 0	—
Repair of buildings ...	—	—	—	—	117 8	—
Repair of roads ...	—	—	—	—	63 91	—
Issue of water ...	—	—	—	—	—	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	—	—	—	—	17 15	—
Contingencies ...	—	—	—	—	65 94	—

	1900. Rs. c.	1900. Rate per Mile. Rs. c.	1901. Rs. c.	1901. Rate per Mile. Rs. c.	1902. Rs. c.	1902. Rate per Mile. Rs. c.
Channels.						
Clearing jungle and weeding ...	—	—	—	—	9 50	—
Removal of silt ...	—	—	—	—	3 4	—
Upkeep of channels and bunds ...	—	—	—	—	184 80	—
Upkeep of masonry and bridges ...	—	—	—	—	137 57	—
Main transport fund ...	—	—	—	—	40 0	—
					998 99	

MINNERI TANK, NORTH-CENTRAL PROVINCE.

General Charges.						
Pay of guardian ...	—	—	—	—	—	—
Repair of buildings ...	108 65	—	152 0	—	18 56	—
Repair of roads (2 miles) ...	191 27	95 63	119 18	59 59	73 58	36 76
Issue of water ...	—	—	19 76	—	—	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	—	—	9 0	—	18 0	—
Contingencies ...	—	—	—	—	44 73	—
Channels.						
Clearing jungle and weeding ...	—	—	—	—	64 20	—
Removal of silt ...	—	—	—	—	62 93	—
Upkeep of channels and bunds ...	—	—	—	—	—	—
Upkeep of masonry and bridges ...	—	—	—	—	317 47	—
	299 92		299 94		599 42	

MADAWACHCHIYA, NORTH-CENTRAL PROVINCE,

General Charges.						
Pay of head cooly ...	17 74	—	60 0	—	60 0	—
Repair of buildings ...	—	—	—	—	—	—
Repair of roads ...	—	—	—	—	—	—
Issue of water ...	—	—	—	—	—	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	11 7	—	5 40	—	5 40	—
Contingencies ...	—	—	—	—	—	—
Channels.						
Clearing jungle and weeding (3 miles) ...	27 56	9 19	33 77	11 26	9 90	3 30
Removal of silt ...	29 81	11 92	—	—	—	—
Upkeep of channels and bunds (3 miles)	25 88	8 63	80 83	26 94	40 40	13 47
Upkeep of masonry and bridges ...	23 50	—	—	—	—	—
	135 56		180 0		115 70	

NUWARAWEWA, NORTH-CENTRAL PROVINCE.

General Charges.						
Pay of guardian ...	100 0	—	—	—	398 34	—
Repair of buildings ...	91 57	—	—	—	68 77	—
Repair of roads ...	—	—	—	—	—	—
Issue of water ...	40 50	—	50 70	—	181 60	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	145 68	—	—	—	281 85	—
Contingencies ...	387 57	—	81 55	—	239 80	—
Channels.						
Clearing jungle and weeding (8·62 miles)	577 23	66 96	59 28	6 9	315 95	36 65
Removal of silt (5·19 miles) ...	771 19	148 59	69 63	13 41	134 19	25 85
Upkeep of channels and bunds (8·62 miles) ...	0,895 8	127 6	148 10	16 2	420 94	48 83
Upkeep of masonry and bridges ...	297 25	—	—	—	182 64	—
	3,506 7		409 26		2,224 8	

	1900. Rs. c.	1900. Rate per Mile. Rs. c.	1901. Rs. c.	1901. Rate per Mile. Rs. c.	1902. Rs. c.	1902. Rate per Mile. Rs. c.
TISSAWEWA, NORTH-CENTRAL PROVINCE.						
General Charges.						
Pay of guardian ...	400 0	—	—	—	200 0	—
Repair of buildings ...	20 25	—	—	—	19 90	—
Repair of roads ...	—	—	—	—	—	—
Issue of water ...	52 69	—	49 28	—	34 92	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	103 78	—	—	—	12 25	—
Contingencies ...	140 78	—	—	—	316 65	—
Channels.						
Clearing jungle and weeding (7·19 miles)	225 51	31 36	34 17	4 75	604 20	84 3
Removal of silt (5·55 miles) ...	412 12	74 26	76 94	13 86	239 96	43 24
Upkeep of channels and bunds (7·19 miles) ...	830 10	115 45	19 65	2 73	769 36	107 4
Upkeep of masonry and bridges ...	343 88	—	—	—	211 2	—
	2,529 11		180 4		2,722 26	
BASAWAKKULAM, NORTH-CENTRAL PROVINCE.						
General Charges.						
Pay of guardian ...	200 0	—	150 0	—	—	—
Repairs of buildings ...	41 60	—	8 58	—	85 20	—
Repairs of roads (5 miles) ...	—	—	—	—	—	—
Issue of water ...	23 49	—	—	—	130 47	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	70 38	—	—	—	1 50	—
Contingencies ...	121 82	—	6 25	—	255 93	—
Channels.						
Clearing jungle and weeding (5 miles) ...	135 40	27 8	86 14	17 23	77 73	15 55
Removal of silt (4 miles) ...	389 11	95 0	130 0	31 77	33 6	8 26
Upkeep of channels and bunds (5 miles)	610 56	122 11	28 94	5 79	392 58	78 52
Upkeep of masonry and bridges ...	144 28	—	—	—	117 8	—
	1,736 64		409 91		1,093 55	
KALAWEWA SCHEME, NORTH-CENTRAL PROVINCE.						
General Charges.						
Pay and allowance of guardian ...	1,026 50	—	80 0	—	1,591 13	—
Repair of buildings ...	673 61	—	—	—	1,111 89	—
Repair of roads ...	—	—	—	—	—	—
Issue of water ...	185 80	—	20 0	—	763 88	—
Planting trees ...	—	—	—	—	—	—
Transport charges ...	383 48	—	90 31	—	447 40	—
Contingencies ...	930 5	—	412 57	—	1,174 72	—
Channels.						
Clearing jungle and weeding (64·38 miles)	689 4	10 77	304 4	4 75	984 87	15 30
Removal of silt (60 miles) ...	3,599 83	60 0	267 82	4 46	179 39	2 99
Upkeep of channels and bunds (64·38 miles) ...	1,301 11	20 33	543 58	8·49	2,623 61	47 52
Upkeep of masonry and bridges ...	409 65	—	—	—	299 27	—
Main Transport Fund	—	—	—	—	40 0	—
	9,199 7		1,718 32		9,236 16	

MAINTENANCE OF WORKS.

Deduru-oya Works, North-Western Province.

	1897.		1898.		1899.		1900.		1901.		1902.	
	Total.	Rate per Mile.	Total.	Rate per Mile.	Total.	Rate per Mile.	Total.	Rate per Mile.	Total.	Rate per Mile.	Total.	Rate per Mile.
General Charges.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
Pay and allowance of guardians ...	360 0	—	320 0	—	765 0	—	975 0	—	825 0	—	1,310 0	—
Repair of buildings ...	212 12	—	154 52	—	220 2	—	78 51	—	177 62	—	37 5	—
Repair of roads (26 miles) ...	227 19	8 74	200 46	7 71	210 10	8 8	218 49	8 40	193 58	7 45	379 55	14 60
Issue of water ...	108 55	—	90 6	—	84 5	—	273 44	—	294 53	—	116 10	—
Planting trees ...	43 67	—	55 52	—	8 9	—	7 56	—	16 79	—	—	—
Transport charges ...	63 46	—	71 63	—	145 79	—	95 51	—	95 51	—	95 50	—
Contingencies ...	154 39	—	100 66	—	522 90	—	443 53	—	406 45	—	259 19	—
Main Channels.												
Clearing jungle and weeding (25 miles) ...	374 15	14 97	259 2	10 36	434 13	17 36	350 19	14 1	200 41	8 2	371 12	14 84
Removal of silt (23½ miles)	527 42	22 24	938 87	39 95	794 51	33 81	346 83	23 27	1,327 95	56 51	1,394 4	59 54
Upkeep of channels and bunds (25 miles) ...	626 32	25 5	269 84	10 79	370 20	18 41	282 90	11 32	205 4	8 20	205 64	8 23
Upkeep of masonry and bridges ...	285 13	—	625 0	—	667 69	—	553 3	—	484 57	—	77 43	—
Distributaries.												
Clearing jungle and weeding	102 15	20 43	148 75	24 79	180 56	22 57	354 65	35 46	120 95	12 10	149 64	14 96
Removal of silt ...	15 29	3 6	30 57	5 9	171 62	28 60	135 42	22 57	188 97	31 49	231 9	38 51
Upkeep of channels and bunds	49 99	10 0	96 26	16 4	60 46	10 8	45 82	7 64	62 80	10 47	59 2	5 90
Upkeep of masonry ...	22 91	—	220 46	—	129 2	—	405 87	—	174 82	—	89 63	—
Total ...	3,172 74	—	3,581 62	—	4,764 14	—	4,766 75	—	4,775 99	—	4,775 0	—

APPENDIX H.

General Irrigation Returns corrected up to December 31, 1901.

Name of each Work (grouping the Works forming connected Systems).	Date of Completion.	Outlay.		Area Benefited.				Sale of Crown Land.			Returns.				Remarks
		Government Expenditure on Restoration or Construction.	Expenditure on Upkeep and Repairs.	Old Land benefited by Work.	New Land Cultivated consequent on Irrigation.	Further Land Irrigable by the Work.	Total Land benefited (*see Specification, if any*).	Crown Land sold since Construction or Restoration.	Amount realized by Sale.	No. of Persons who have acquired newly Irrigated Land.	Rate per Acre per Annum payable (state if exempted from payment).	Amount recovered in Rates during year ended on above date.	Total Amount recovered in Rates up to same date.	Amount recovered up to same date in repayment by instalments of cost, or portion of cost, of Work.	
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*	*m*	*n*	*o*	*p*
NORTHERN PROVINCE.		Rs. c.	Rs. c.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs. c.		Rs. c.	Rs. c.	Rs. c.	Rs. c.	
MULLAITTIVU DISTRICT.															
1. Vavuniya tank ...	1885–89	11,523 62	25,763 23	252¼	100¾	43	396	110¾	1,838 60	26	0 25	87 70	550 63	—	Rate paid in perpetuity.
2. Iratperiyakulam ...	1886–87	25,557 28	10,452 85	117¾	137	248¼	503	212½	1,692 13	72	1 0	254 67	1,867 83	—	do.
3. Mamadu ...	1886–98	16,596 0	11,728 5	103½	139½	421	664	240½	2,467 0	51	1 0	243 2	1,668 72	—	do.
4. Mandukoddai ...	1886–92	34,806 8	6,180 21	97	117¼	6¾	221	126¼	1,109 88	44	1 0	214 36	1,467 0	—	do.
5. Maha Rambaikulam	1888–92	16,712 12	5,330 28	55	35	125¾	215¾	215¾	2,161 0	10	1 0	215 95	1,531 65	—	do.
6. Kanakarayankulam ...	1888–90	27,714 79	2,671 85	39½	39¾	70¾	150	83½	955 50	9	1 0	59 40	511 0	—	do.
7. Vengalacheddikulam ...	1888–92	17,570 63	2,521 77	77	47¾	25¼	150	47¾	483 0	1	1 0	124 63	943 72	—	(50 cents on oppum lands).
8. Pavatkulam and Periya Olukkulam ...	1893–02	21,086 86	2,442 16	46	2	307½	355½	18¼	63 25	20	1 0	48 13	288 78	—	Rate paid in perpetuity.
9. Periyakulam ...	1891–97	22,883 50	4,920 16	109	—	515	624	59	612 0	7	1 0	109 11	872 95	—	do.
10. Kanukkeni tank ...	1891–01	116,122 99	2,995 61	—	—	—	—	—	—	—	—	—	—	—	do.
	1902	16,570 83													Not completed yet.
		132,693 82													
11. Chinnar dam ...	1880–98	296 11	1,191 48	—	—	—	—	—	—	—	—	—	—	—	—
12. Tannimurippu survey	1889	521 50	—	—	—	—	—	—	—	—	—	—	—	—	—
13. Olumadu tank survey	1889	44 14	—	—	—	—	—	—	—	—	—	—	—	—	—
14. Nantikkadal scheme survey	1887–99	327 0	—	—	—	—	—	—	—	—	—	—	—	—	—
JAFFNA DISTRICT.															
15. Punnalai tank survey	1896	155 93	—	—	—	—	—	—	—	—	—	—	—	—	—
16. Pallavarayankaddu survey	1893	199 54	—	—	—	—	—	—	—	—	—	—	—	—	—
17. Malappuvillu survey	1893	30 66	—	—	—	—	—	—	—	—	—	—	—	—	—
18. Vannary survey ...	1893	199 91	—	—	—	—	—	—	—	—	—	—	—	—	—
MANNAR DISTRICT															
19. Kurai tank survey ...	1894–96	657 95	—	—	—	—	—	—	—	—	—	—	—	—	—
20. Vellankulam kalingula	1890	167 79	—	270	—	—	270	—	—	—	—	—	—	—	—
21 Akattimurippu tank survey	1897	150 0	—	542	—	—	542	—	—	—	—	—	—	—	—
	1902	660 45													
		810 45													

22. Aruvi-aru survey	1891	349 92	—	—	—	—	—	—	—	—	—	—	—	—	—	—
23. Giant's tank	1881–01	538,463 24	2,085 20	7100	3,897	11,968	22,965	102	1,366 70	40	1 0	10,769 17	10,841 17	—	Rate paid in perpetuity.	—
	1902	59,163 99	3,299 56													
24. Pallankulam tank	1896	451 68	—	180	—	—	180	—	—	—	—	—	—	—		—
25. Karachchi scheme	1901	2,000 0	—	—	—	—	—	—	—	—	—	—	—	—		—
	1902	18,478 86														
26. Vavunikkulam	1901	1,323 42	—	—	—	—	—	—	—	—	—	—	—	—		—
	1902	2,842 53														
27. Village tanks—pipe sluices, &c. ...	1886–02	103,357 92	9 96	9,357	—	—	9,357	7	73 0	—	—	—	—	—		—
Total ...		1056987 24	81,592 37	18,346	4,516	13731¼	36593¼	1,223¾	12,822 6	280	—	12,126 14	20,543 45	—		
SOUTHERN PROVINCE.																
GALLE DISTRICT.																
1. Waggalmodara and Timbirimodara flood outlets	1889	4,536 47	1,242 28*	700	236	—	936	28	300 0	5	—	—	—	2,426 37	Repayment of the cost of the works is being made in ten annual instalments.	
Supplementary expenditure (spent gratuitously)	1890–91	19,505 9	—													
		24,041 56														
2. Dedduwe irrigation works ...	1888	28,046 31	3,710 64*	2,149	120½	—	2,269½	120	59 0	2	—	—	—	12,927 3		
Supplementary expenditure (spent gratuitously)	1890–91	5,654 0	—													
		33,700 31														
3. Diviture dam and sluice ...	1861	66,000 0	8,862 7	—	—	—	—	—	—	—	—	—	—	—		—
4. Digoda tank	1873	4,134 35	1,291 42	138	—	—	138	—	—	—	—	—	—	4,027 35	The expectations had in regard to this work were never realized, and its upkeep consequently ceased.	
5. Patamulla canal	1891	2,990 73	30 62	—	—	—	—	—	—	—	—	—	—	—	A small village tank in charge of the Mudaliyar, Talpe pattu. The repayment of cost was made in ten instalments and has now ceased. No maintenance is charged.	—
MATARA DISTRICT.																
6. *Gangaboda Pattu Works.*																
(*a*) Hali-ela tank and channel to Urapola extension ...	1872–92	64,035 80		1,316	383	—	1,699	—	—	—	1 0	1,699 71	42,590 43	—	Rate paid in perpetuity.	
(*b*) Urapola anicut and channel, Sapugoda anicut including bridge, channel, and head sluice, Kirama ...	1873–74	7,561 55	16,270 26*	296	—	—	296	—	—	—	1 0	296 45	8,388 34	—	do.	
(*c*) Ellawala tank, anicut, and channel	1874–92	101,842 56		1,098	186	—	1,284	—	—	—	1 0	1,284 49	31,013 1	—	do.	
(*d*) Homeragoda anicut and channel	1889	4 488 38		—	—	—	—	—	—	—	—	—	—	—	—	
(*e*) Pettera anicut and channel ...	1878	66,749 25		593	195	—	788	—	—	—	1 0	787 40	19,481 39	—	Rate paid in perpetuity.	
(*f*) Alawatugoda anicut, channel, and extra works ...	1874–79	62,482 45	87 80	335	—	—	335	—	—	—	1 0	335 26	8,316 0	—	do.	
(*g*) Gangaboda pattu works ...	1877–99	47,610 10	3,569 18	—	—	—	—	—	—	—	—	—	—	—	—	

* Includes expenditure by the Director of Irrigation.

Name of each Work (grouping the Works forming connected Systems).	Date of Completion.	OUTLAY.		AREA BENEFITED.				SALE OF CROWN LAND.			RETURNS.				REMARKS.
		Government Expenditure on Restoration or Construction.	Expenditure on Upkeep and Repairs.	Old Land benefited by Work.	New Land Cultivated consequent on Irrigation.	Further Land Irrigable by the Work.	Total Land benefited (*see Specification, if any*).	Crown Land sold since Construction or Restoration.	Amount realized by Sale.	No. of Persons who have acquired newly Irrigated Land.	Rate per Acre per Annum payable (state if exempted from payment).	Amount recovered in Rates during year ended on above date.	Total Amount recovered in Rates up to same date.	Amount recovered up to same date in repayment by instalments of cost, or portion of cost, of Work.	
	b	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*	*m*	*n*	*o*	
SOUTHERN PROVINCE—*contd.* MATARA DISTRICT—*contd.*		Rs. c.	Rs. c.	Acres.	Acres.	Acres.	Acres	Acres.	Rs. c.		Rs. c.	Rs. c.	Rs. c.	Rs. c.	
7. Denegama and Uyaniwewa ...	1868–01	122,834 62	3,671 52*	673	105	—	778	105	1,234 25	105	1 0	778 71	19,921 88	—	Rate paid in perpetuity.
8. Kekanadura, Kumbalgama, Makawita tanks and channels ...	1867–98	65,383 14	15,360 11*	914	31	—	945	4	290 0	—	1 0	945 3	23,474 20	—	do.
9. Dandeniya tank	1877–01	46,354 91	2,477 91*	494	2	—	496	—	—	—	1 0	496 82	10,779 82	—	do.
10. Urubokka scheme	—	—	—	7,626¼	1,523½	—	9,149¾	1,308	1,052 90	—	1 0	—	—	—	—
(*a*) Urubokka dam ...	1858	89,732 61	7,230 40*	4,000	1,300	—	5,300	1,305	948 90	—	—	—	—	—	—
(*b*) Wila-ela channel ...	1885	6,212 98	—	—	—	—	—	—	—	—	—	—	—	—	This is also called Udukiriwila tank, and is being paid for by a rate (Re. 1 per acre) in perpetuity.
(*c*) Kehelwatta channel ...	1892	497 12	—	—	—	—	—	—	—	—	—	—	—	—	—
		96,442 71													
11. (*a*) Dangaha-ela anicut ...	1898	261 97	249 12	—	—	—	—	—	—	—	—	—	—	—	Built by the local Irrigation Committee. No rate levied.
(*b*) Kapparatota sea gate ...	1898	150 0	—	—	—	—	—	—	—	—	—	—	—	—	—
12. Four flood outlets	1890–94	3,603 77	1,998 25	—	—	—	—	—	—	—	—	—	—	—	Built by the local Irrigation Committee. No rate levied.
13. Ketonwila extension ...	1898	100 0	—	—	—	—	—	—	—	—	—	—	—	—	do.
14. Thirteen village tanks ...	1900	4,926 50	1,419 14	—	—	—	—	—	—	—	—	—	—	—	do.
15. Anicuts, channels, and amunas ...	1900–02	3,348 82	1,082 54	—	—	—	—	—	—	—	—	—	—	—	—
16. Minor irrigation works ...	1900–02	1,724 74*	668 90	—	—	—	—	—	—	—	—	—	—	—	Built by the local Irrigation Committee. No rate levied.
17. Sea water gates	1899–01	764 74	662 95	—	—	—	—	—	—	—	—	—	—	—	—
HAMBANTOTA DISTRICT. *Giruwa Pattu West.*															
18. Kirama scheme :—															
(*a*) Kirama tank	1858	91,732 97													Constructed out of Government revenue before introduction of irrigation scheme.
(*b*) Kirama channel ...	1878	2,870 71		5,127	30½	300	5,457½	—	—	26	—	—	—	—	
(*c*) Elpitiya anicut ...	1886	7,110 6	3,782 66*	176	69	200	445	—	—	—	1 0	176 96	2,371 42	—	
(*d*) Channel to Walasmulla ...	1887	537 85		—	—	—	—	—	—	—	—	—	—	—	
(*e*) Arachchi amuna ...	1885	4,719 53		122	56	300	478	—	—	1	1 0	141 42	2,021 17	—	Arachchi amuna and Elpitiya being paid for by a rate (Re. 1 per acre) in perpetuity.
		106,971 12													

19. Urubokka scheme :—																	
(*a*) Udukiriwila dam ...		1873	85,530 63	7,817 10	3018¼	139½	—	3,157¾	3	68 0	—	1 0	3,069 74	14,928 5	—	—	
(*b*) Mandaduwa channel ...		1889	12,992 0	—	—	—	—	—	—	—	—	—	686 33	7,208 33	—	Being paid for by a rate (Re. 1 per acre) in perpetuity.	
Tanks dependent on it are :—																	
(*c*) Potuwewa		1888	1,034 17	—												The recoveries for these 692 acres are those shown above as recovered under Mandaduwa channel, viz., Rs. 686·33.	
(*d*) Etunnawalawewa ...		1888	1,034 46	—													
(*e*) Kumbukarawewa ...		1888	1,033 87	—	608	84	—	692	—	—	—	—	—	—	—		
(*f*) Pattiyapola Mahawewa ...		1892	9,544 5	—													
(*g*) Netulpitiya Mahawewa ...		1889	1,035 98	—													
			13,682 53														
20. Tanks dependent on rain-water are :—																	
(*a*) Kattakaduwewa ...		1887	1,034 49	—	41	—	—	41	—	—	—	—	—	—	—		
(*b*) Ittademaliya Mahawewa ...		1887	859 83	—	137	—	—	137	—	—	—	—	—	—	—		
(*c*) Pallattara Alutwewa ...		1887	1,040 0	—	319	—	—	319	—	—	—	—	—	—	—		
(*d*) Puwakdandawa Kudawarawewa		1887	1,711 21	—	232	—	—	232	—	—	—	—	—	—	—		
(*e*) Hitinamaluwawewa ...		1886	570 48	—	282	—	—	282	—	—	—	—	—	—	—		
(*f*) Koholanewewa ...		—	1,031 18	—	193	—	—	193	—	—	—	—	—	—	—	Earthwork done by landowners, and cost of masonry contributed by Government.	
			6,247 19														
		1886–89	383,106 21														
Giruwa Pattu East.		1900	17,972 5														
21. Walawe-ganga channel*		1901	12,480 23	48,307 38	1328	1,593	10,350	13271	2,459	28,491 0	262	1 0	3,734 40	11,205 13	—	This channel is being paid for by a rate (Re. 1 per acre) in perpetuity.	
		1902	4,604 40	—													
			418,162 89														
Magam Pattu.																	
22. Kirindi-oya scheme :—																	
(*a*) Anicut at Elagalla across Magam-oya ...		1871															
(*b*) Channel leading to Tissa ...		to															
(*c*) Tissamaharama ...		1901*	210,595 62	25.504 36	150	4,953	3,178	8,281	6,209	98,519 0	264	1 0	368 94	1,935 83	—	do.	
(*d*) Debarawewa		1902	38,359 42														
(*e*) Yodawewa																	
(*f*) Magama channel ...																	
			248,955 4														
23. (*a*) Wirawilawewa ...		1886	797 16	—	150	—	—	150	—	—	—	—	—	—	—	—	
(*b*) Yodakandia (surveys) ...		1902	1,846 39	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total			1726717 91	155296 52	32215½	11007	14328	57550½	11541	130963 5	665	—	14,801 66	203,635 0	19,380 75		
EASTERN PROVINCE.																	
BATTICALOA DISTRICT.																	
1. Rugam tank*		1868	196,072 27	47,902 79													
Vammiyadi anicut ...		1889	5,859 23	562 64	3,216	3,810	716	7,742	3,810	57,726 0	—	0 10	485 5	5,311 20	53,613 80	Original estimated cost of the work, Rs 87,360: expended, Rs. 86,990.	
Periyandavaikkal ...		1890															
			201,931 50														
2. Sakamam and Vammiyadi Scheme :—																	
Sakamam tank and channel ...		1872	117.684 4														
Panichayadi wall ...		1886	2.764 76	25,469 93	504	1,914	12	3,430	1,914	27,578 0	—	—	—	—	17,388 0	Original estimate for Sakamam to be repaid, Rs. 37,110.	
Urakkaikandam channel* ...		1892	7,997 85														
			128,446 65														

* Includes expenditure by the Director of Irrigation.

Name of each Work (grouping the Works forming connected Systems).	Date of Completion.	OUTLAY. Government Expenditure on Restoration or Construction.	OUTLAY. Expenditure on Upkeep and Repairs.	AREA BENEFITED. Old Land benefited by Work.	AREA BENEFITED. New Land Cultivated consequent on Irrigation.	AREA BENEFITED. Further Land Irrigable by the Work.	AREA BENEFITED. Total Land benefited (*see Specification, if any*).	SALE OF CROWN LAND. Crown Land sold since Construction or Restoration.	SALE OF CROWN LAND. Amount realized by Sale.	SALE OF CROWN LAND. No. of Persons who have acquired newly Irrigated Land.	RETURNS. Rate per acre per Annum payable (state if exempted from payment).	RETURNS. Amount recovered in Rates during year ended on above date.	RETURNS. Total Amount recovered in Rates up to same date.	RETURNS. Amount recovered up to same date in repayment by instalments of cost, or portion of cost, of Work.	REMARKS
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*	*m*	*n*	*o*	*p*
EASTERN PROVINCE—*contd.*		Rs. c.	Rs. c.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs. c.		Rs. c.	Rs. c.	Rs. c.	Rs. c.	
BATTICALOA DISTRICT—*contd.*															
3. Manalpuddi-aar Scheme :—															
Pulukunavi tank*	1872	56,342 80	49,252 50	670	3,252	547	4,469	3,252	57,615 0	—	0 10	255 95	1,889 90	34,495 25	Original estimated cost of the work, Rs. 38,560 ; expended. Rs. 38,396·58.
Manalpuddi-aar anicut and channel* ...	1886	16,611 34		1,024	778	1,458	3,260	778	8,634 0	—	0 10	60 10	356 20	8,891 83	Original estimated cost of work was Rs. 26,778·92.
Kadukkamunai tank and channel* ...	1872	33,679 56													
4. Divulana tank*	1872	43,924 48	70,551 4	391	2,316	312	3,019	2,316	33,942 0	—	0 10	83 5	948 80	8,454 49	Original estimated cost of work, Rs. 34,896·54.
Tumpankeni tank*	1892	20,521 99		691	385	27	1,103	385	10,332 0	—	0 50	231 41	1,730 37	—	Pays rate in perpetuity.
5. Chadayantalawa Viragoda Scheme :—															
Chadayantalawa tank* ...	1873	55,926 90	25,778 10	500	1,787	968	3,255	1,787	35,751 0	—	0 10	114 95	950 70	20,184 92	Original estimated cost of work was Rs. 54,146.
Viragoda tank*	1889	37,668 83													
6. Medduvaddai bund and sluice ...	1877	4,508 13	132 70	975	—	—	975	—	—	—	—	—	—	—	—
7. Palukamam salt water bund ...	1889	8,594 51	1,573 12	400	—	—	400	—	—	—	—	—	—	—	—
8. Vakaneri tank*	—	103,477 55	—	—	—	—	—	—	—	—	—	—	—	—	—
9. Kallady Barrage scheme survey ...	1893	429 19	—	—	—	—	—	—	—	—	—	—	—	—	—
10. Pattipolai-aru Works :—															
Irrakkamam tank	1857	65,149 87													Original cost to be repaid :— Estimated. Rs. / Expenditure. Rs. c.
Amparai tank	1873	32,217 33													
Kalmadu anicut	1867	18,510 55													
Virayadi anicut	1858	24,050 0													
Senkatpadai anicut ...	1872	36,190 44													
Pattampuddi anicut ...	1880	47,346 52													
Kurunalkanchi anicut ...	1871	8,250 43	127758 53*	9,152	14,501	—	23,653	14,501	366,567 0	—	0 10	2,138 65	23,591 10	78,590 19	Amparai extension 31,364 / 28,596 83
Kaliodai anicut	1880	38,817 0													Chenkatpadai anicut .. 41,000 / 35,025 6
Vaddaivaikal anicut ...	1872	7,321 69													Kurunalkanchi anicut .. 5,000 / 4,995 54
Aladiodai anicut	1872	14,968 64													Vaddaivaikal anicut 8,068 / 6,221 64
Suraiyadi anicut	1879	6,104 11													Aladiodai anicut .. 14,748 / 13,458 78
Uppar aqueduct	1883	14,436 46													Total .. 100,180 / 88,297 85
Kondavaddavan surveys ...	1902	525 35	—	—	—	—	—	—	—	—	—	—	—	—	—
11. Panama Pattu Works :—															
Rotawewa tank	1887	27,449 58	45,492 11*	688	127	1,245	2,060	127	1,415 0	—	1 0	371 25	4,141 50	—	Pays rate in perpetuity.
Lahugalla tank	1888	9,991 23		90	116	—	206	116	1,240 0	—	—	—	—	—	—
Panama tank	1886	1,848 44		255	—	—	255	—	—	—	—	—	—	—	—
Naulla tank	1886	2,683 51		325	—	—	325	—	—	—	—	—	—	—	—
Panama pattu surveys ...	1902	529 65		—	—	—	—	—	—	—	—	—	—	—	—
12. Hakgalawewa	1889	2,792 20	952 12*	3	—	16	19	—	—	—	—	—	—	—	—
13. Kehelulla tank	1873	429 67	163 6	—	—	—	—	—	—	—	—	—	—	—	—
14. Maha-oya tank	1879	9,117 11	6,557 5*	—	54	—	54	54	37 0	—	—	—	—	—	—

15. Pullumalai tank * ...	...	1896	11,270 85	1,735 50	—	321	—	321	321	2,687 0	—	—	—	—	—	—	
16. Tumpankeni tank supply channel	...	1897	4,893 0	—	—	—	—	—	—	—	—	—	—	—	—	—	
17. Chettiavattai-aar sluice	...	1895	782 29	—	—	—	—	—	—	—	—	—	—	—	—	—	
18. Dampalawinna tank survey	...	—	1,050 0	—	—	—	—	—	—	—	—	—	—	—	—	—	
19. Tembittiyawewa tank survey and construction * ...	...	—	10,057 53	—	—	—	—	—	—	—	—	—	—	—	—	—	
20. Unnichchai tank ...	...	—	18,179 74	—	—	—	—	—	—	—	—	—	—	—	—	—	
TRINCOMALEE DISTRICT.																	
21. Kantalay tank * ...	...	1869	87,738 95	40,845 61	1,262	1,213	8,571	11,046	1,213	31,815 97	117	0 10 1 0	237 27 255 89	2,762 57	—	Land sold prior to 1885 pay maintenance at 10c., and those sold subsequently at Re. 1.	
22. Andankulam ...	...	1885	34,851 86	41617 6*	235	32	300	567	32	1,764 0	5	1 50 0 50	133 88	—	4,892 56	Pays restoration at Re. 1·50 per acre.	
Periyakulam ...	...	1869	9,409 70		95	97	632	824	97	363 0	7	0 10	20 36	220 34	5,574 61	Pays for maintenance only.	
Vilankulam ...	...	1893	564 77	—	—	—	—	—	—	—	—	—	—	—	—	—	
23. Allai Scheme :—																	
Allai supply channel	...	—	1,380 67	—	—	—	—	—	—	—	—	—	—	—	—	—	
Allai tank ...	...	1869	48,301 33		852	957						0 10	55 10	321 51			
Peruveli tank ...	...	1890	11,759 89				117	2,379	977	23,620 85	109	0 10 2 22	108 57 —	1,694 26	43,855 37	Connected scheme. Maintenance at 10c. per acre, and restoration at Rs. 2·22 per acre.	
			61,441 89	75163 20*	433	20											
24. Illakantai tank ...	...	1891	3,053 53		57	162	51	270	162	819 0	29	—	—	—	766 14	Pays restoration at Re. 1·12 per acre.	
Pendrayankulam (survey)	...	1894	103 5	—	—	—	—	—	—	—	—	—	—	—	—	—	
Elumpurukkikulam (survey)	...	—	147 90	—	—	—	—	—	—	—	—	—	—	—	—	—	
Maduvilkulam (contouring)	...	—	99 18	—	—	—	—	—	—	—	—	—	—	—	—	—	
Etandamurippu tank (survey)	...	—	311 6	—	—	—	—	—	—	—	—	—	—	—	—	—	
Kalladaippu-aar anicut (survey)		—	98 51	—	—	—	—	—	—	—	—	—	—	—	—	—	
Tumparai tank (survey)	...	—	422 16	—	—	—	—	—	—	—	—	—	—	—	—	—	
Village tanks * ...	...	—	7,271 67	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total ...			1332540 85	561,507 6	21,818	31,842	14,972	68,632	31,842	661,906 82	267	—	4,551 48	43,918 45	276,707 16		
WESTERN PROVINCE.																	
COLOMBO DISTRICT.																	
Alutkuru Korale South.																	
1. Kadurugahawewa ...	...	1891	2,438 74	401 4	66	—	—	66	—	—	—	1 0	6 8	654 75	—	Constructed under the 47th and 48th sections of the Ordinance No. 23 of 1889. Fieldowners benefited are paying a rate of Re. 1 an acre per annum in perpetuity.	
2. Dikmaga Pahalawewa	...	1891	1,080 41	337 63	50	—	—	50	—	—	—	1 0	50 62½	539 62½	—	do.	
3. Polgahawewa { Survey	...	1889	100 0	746 59	76	—	—	76	—	—	—	1 0	78 12	776 10	—	do.	
Restoration	...	1891	1,710 19														

* Includes expenditure by the Director of Irrigation.

Name of each Work (grouping the Works forming connected Systems).	Date of Completion.	Outlay.		Area Benefited.				Sale of Crown Land.			Returns.				Remarks.
		Government Expenditure on Restoration or Construction.	Expenditure on Upkeep and Repairs.	Old Land benefited by Work.	New Land Cultivated consequent on Irrigation.	Further Land Irrigable by the Work.	Total Land benefited (*see Specification, if any*).	Crown Land sold since Construction or Restoration.	Amount realized by Sale.	No. of Persons who have acquired newly Irrigated Land.	Rate per Acre per Annum payable (state if exempted from payment).	Amount recovered in Rates during year ended on above date	Total Amount recovered in Rates up to same date.	Amount recovered up to same date in repayment by instalments of cost, or portion of cost, of Work.	
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*	*m*	*n*	*o*	*p*
WESTERN PROVINCE—*contd.*		Rs. c.	Rs. c.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs. c.		Rs. c.	Rs. c.	Rs. c.	Rs. c.	
COLOMBO DISTRICT—*contd.*															
4. Dikmaga Ihalawewa ...	1891	1,040 45	391 96	41	—	—	41	—	—	—	1 0	37 87½	419 61½	—	Constructed under the 47th and 48th sections of the Ordinance No. 23 of 1889. Fieldowners benefited are paying a rate of Re. 1 an acre per annum in perpetuity.
5. Peliyagoda sluice	1875 1888	3,025 57 256 88	100 59	400	—	—	400	—	—	—	—	—	—	—	Repairs to an existing work. Constructed gratis. No water-rate is recovered.
6. Kanuwana Tunmodara dam ...	1892	97 42	—	200	—	—	200	—	—	—	—	—	—	—	This work was constructed gratis. No water-rate is recovered.
Salpiti Korale. 7. Boralesgomuwa tank ...	1868 1876 1902	3,574 87 38 71 —	2,495 41 802 79[a]	224	15	—	239	—	—	—	0 10	23 97	334 41	3,574 87	This work was originally constructed on the understanding that the cost should be repaid by the fieldowners in ten annual instalments. Accordingly the whole of the cost, amounting to Rs. 3,574·87, was repaid between the years 1869 and 1884. Under the provisions of the Ordinance No. 23 of 1889 (sections 51 and 52) a sum of 10c. per acre per annum is recovered to meet cost of upkeep.
8. Kesbewa tank	1872	619 61	557 19	75	—	—	75	—	—	—	—	—	—	—	The earthwork was done by the people. The sluice and spill water were constructed by Government gratis. No water-rate is recovered.
9. Attidiya sluice	1890	1,134 41	688 64	166	—	—	166	—	—	—	0 10	16 68½	33 82½	800 0	The original agreement was to pay Rs. 800 in ten annual instalments to cover the cost of construction of work, although the actual cost was Rs. 1,134·41

	Siyane Korale West.															
10.	Wewelduwa sluice	1887	1,181 83	—	200	—	—	200	—	—	—	—	—	—	—	The ten annual instalments have been paid in full. A sum of 10c. per acre per annum is being recovered under the provisions of Ordinance No. 23 of 1889. The owners of the paddy fields cleared the canal, and the Government constructed the sluice. The Central Irrigation Board exempted the owners of the fields from repayment of the cost in consideration of the work done by them.
11.	Totuwe *alias* Wedamulle sluice ...	1890	408 16	0 25	50	—	—	50	—	—	—	—	—	—	—	This work was constructed gratis. No water-rate is recovered.
12.	Nadakondana-ela ...	1888	659 91	135 11	200	—	—	200	—	—	—	—	—	—	—	This was a work constructed in connection with the Wewelduwa sluice. No water-rate is recovered.
13.	Padakkada dam	1892	415 12	264 12	112	—	—	112	—	—	—	—	—	—	—	Constructed at the expense of fieldowners. The Government supplied the sluice. No water-rate is recovered.
14.	Clearing of Koskandawala-ela ...	1891	22 50	—	—	—	—	—	—	—	—	—	—	—	—	This work was done gratis. No water-rate is recovered.
15.	Dam along Kelani-ganga { Survey ... / — ...	1889 / 1893	393 99 / 1,842 15	{ 2,923 7	—	—	—	—	—	—	—	—	—	—	—	Constructed gratis. No water-rate is recovered.
	KALUTARA DISTRICT.															
16.	Bolabotuwewewa	1877	798 98	50 15	103	—	—	103	—	—	—	—	—	—	—	Earthwork done by villagers, and masonry work by Government. No water-rate is recovered.
17.	Rayigama *alias* Uyanwewa ...	1883	7,332 33	90 54	175	—	—	175	—	—	—	—	—	—	—	do.
18.	Remunawewa	1886	1,924 4	54 23	169	—	—	169	—	—	—	—	—	—	—	do.
19.	Medagamawewa	1878	1,422 87	70 36	116	—	—	116	—	—	—	—	—	—	—	do.
20.	Maha and Kudawewa ...	1876	1,517 8	47 25	82	—	—	82	—	—	—	—	—	—	—	do.
21.	Kompe-ela	1891	4,858 66	56 25	43	—	—	43	—	—	—	—	—	—	—	do.
22.	Nikatu-ela	1890	15,567 0	2,708 93	588¾	386¾	100¾	1,076¼	386¾	16,660 82	112	—	—	—	13,207 63	This work was constructed on the understanding that the cost should be repaid in ten annual instalments. Up to date Rs. 7,636·45 has been recovered for nine years. A sum of Rs. 5,571·18 was included in the upset price of 386A. 3R. 22P. sold in 1898 and 1899. This sum is added to the amount of the instalments under O.

* Expended under the Director of Irrigation.

Name of each Work (grouping the Works forming connected Systems).	Date of Completion.	OUTLAY.		AREA BENEFITED.				SALE OF CROWN LAND.			RETURNS.				REMARKS.
		Government Expenditure on Restoration or Construction.	Expenditure on Upkeep and Repairs.	Old Land benefited by Work.	New Land Cultivated consequent on Irrigation.	Further Land Irrigable by the Work.	Total Land benefited (*see Specification, if any*).	Crown Land sold since Construction or Restoration.	Amount realized by Sale.	No. of Persons who have acquired newly Irrigated Land.	Rate per Acre per Annum payable (state if exempted from payment).	Amount recovered in Rates during year ended on above date.	Total Amount recovered in Rates up to same date.	Amount recovered up to same date in repayment by instalments of cost, or portion of cost, of Work.	
	b	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*	*m*	*n*	*o*	*p*
WESTERN PROVINCE—*contd.*		Rs. c.	Rs. c.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs. c.		Rs. c.	Rs. c.	Rs. c.	Rs. c.	
KALUTARA DISTRICT—*contd.*															
23. Toragala-ela	1886	4,262 0	72 86	175	35	—	210	35	350 0	7	—	—	—	—	Earthwork was done by villagers as well as the clearing of the canal, in consideration of which a sluice gate was constructed by Government. No water-rate is recovered.
24. Hinatiyangala-ela	1886	1,744 43	120 50	150	100	—	250	—	—	—	—	—	—	—	Repairs to an existing work constructed gratis. Landowners exempted from repayment of cost of construction.
25. Modarawila-ela	1888	827 49	179 39	125	10	—	135	—	—	—	—	—	—	—	Repairs to an existing work constructed gratis. No water-rate is recovered.
NEGOMBO DISTRICT.															
26. Kotugoda anicut ... Survey ...	1889	800 0	391 99	64	6	12	82	—	—	—	—	—	—	—	This anicut was constructed in place of the one which was swept away by a flood in September, 1886. The Central Irrigation Board exempted the fieldowners from any repayment of cost of construction.
— ...	1890	9,069 66													
27. Eight village tanks	—	—	—	729	—	—	729	—	—	—	—	—	—	—	—
Total ...		70,165 46	13,686 84	4,379¾	552¼	112¾	5,045¼	421¾	17,010 82	119	—	213 35½	2,758 32½	17,582 50	
CENTRAL PROVINCE.															
KANDY DISTRICT.															
Uduuwara.															
1. Beligahamula amuna ...	1887	Not known		5	—	—	5	—	—	—	No rate payable	—	—	—	The initial expenditure was gratuitous. No repayment asked for.
Tumpane.															
2. Telangitella amuna ...	1891	566 96	—	114	—	6	120	—	—	—	do.	—	—	—	
3. Madawala-ela amuna ...	1890	100 0	—	9½	—	—	9½	—	—	—	do.	—	—	—	
Harispattu.															
4. Amunuwela amuna... ...	1893	370 0	—	29¾	—	—	29¾	—	—	—	do.	—	—	333 27	Cost being recovered in ten annual instalments of Rs. 37·03 each since 1894.

5. Aladeniya amuna ...	...	1890	1,684 30	—	36	—	—	36	—	—	—	do.	—	—	—	These repairs and improvements were gratuitous. The works are now maintained by the people interested.
6. Walikukulugoda amuna	...	1887	130 0	—	10	—	—	10	—	—	—	do.	—	—	—	
Uda Dumbara.																
7. Ketiyagama-ela ...	...	1887	240 3	—	12	—	11	23	—	—	—	Exempt from payment				
8. Metideniya-ela ...	...	1888	1,028 45	—	46	—	—	46	—	—	—					
9. Motamure-ela ...	...	1889	564 18	—	27	4	—	31	—	—	—					
10. Uda Mangoda-ela ...	...	1889	370 34	—	35	5	—	40	—	—	—					
11. Siyambalagastenna-ela	...	1895	2,032 91	650 85	8¾	30½	3	42¼	—	—	—	1 0	1 75	245 93	—	Rate paid from 1896.
Pata Dumbara.																
12. Wirapitiya Maha-ela	...	1887	2,633 21	5,432 96	71	4	92*	167	—	—	—	1 0	73 98	502 26	—	
13. Udugoda Bandara-ela	...	1885	4,504 43	3,970 93	260	—	—	260	1	—	—					
14. Teldeniya Wahala-ela	...	1890	7,717 38	206 60	152	—	—	152	—	—	—					
15. Arattana Palla-ela ...	...	1885	421 50	—	4	—	—	4	—	—	—					
16. Alutwela Wahala-ela	...	1890	6,974 45	—	99	59	—	158	—	—	—	There is no promise to pay a water-rate				These repairs and improvements were gratuitous. The works are maintained by the people interested. Any work now done by the Provincial Board is paid for by the landowners.
17. Koholanwele-ela ...	...	1886	1,557 75	—	42	—	—	42	—	—	—					
18. Rambukwellagama-ela	...	1886	298 0	—	14	—	—	14	—	—	—					
Udapalata.																
19. Elpitiyaraja-ela ...	...	1887	118 14	1,293 4	114	—	—	114	—	—	—	—	—	—	—	
20. Palle-ela amuna ...	...	1888	1,932 15	—	24¼	—	—	24¼	—	—	—	—	—	—	—	
21. Halagama-oya amuna	...	1890	241 24	—	54	—	—	54	—	—	—	—	—	—	—	
MATALE DISTRICT.																
22. Elahera ...	...	Dec.1887	55,430 31	299 0	130	—	50	180	—	—	—	—	—	—	—	Landowners exempted from payment of rate by resolution of Central Irrigation Board dated March 29, 1893. Head works are maintained by the Central Irrigation Board, the ela by the landowners.
23. Eraula ...	...	Dec. 30, 1890	16,275 95	1,332 31	36	—	—	186	—	—	—	—	—	—	—	Scheme abandoned. A promise has been given by Government to raise the spill provided the villagers do the necessary earthwork.
24. Rajjammana ...	...	Dec.1886	500 0	—	64	—	—	64	—	—	—	—	—	—	—	A grant of Rs. 500 was made for blasting rocks, &c., the villagers doing all the earthwork.
25. Nadeniya ...	...	Oct.1888	892 0	70 13	48	—	—	48	—	—	—	—	—	—	218 76	Amount spent in 1899 is being recovered in ten annual instalments. No recoveries on initial cost of work.
		1899	546 75													
			1,438 75													
26. Vilattawa ...	...	Dec.1892	1,750 0	—	87	—	39	126	—	—	—	—	—	—	—	Work a failure, and the money paid by the people was refunded.

* Private.

Name of each Work (grouping the Works forming connected Systems).	Date of Completion.	OUTLAY.		AREA BENEFITED.				SALE OF CROWN LAND.			RETURNS.				REMARKS
		Government Expenditure on Restoration or Construction.	Expenditure on Upkeep and Repairs.	Old Land benefited by Work.	New Land Cultivated consequent on Irrigation.	Further Land Irrigable by the Work.	Total Land benefited (*see Specification, if any*).	Crown Land sold since Construction or Restoration.	Amount realized by Sale.	No. of Persons who have acquired newly Irrigated Land.	Rate per Acre per Annum payable (state if exempted from payment).	Amount recovered in Rates during year ended on above date.	Total Amount recovered in Rates up to same date.	Amount recovered up to same date in repayment by instalments of cost, or portion of cost, of Work.	
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*	*m*	*n*	*o*	*p*
CENTRAL PROVINCE—*contd.*		Rs. c.	Rs. c.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs. c.		Rs. c.	Rs. c.	Rs. c.	Rs. c.	
MATALE DISTRICT—*contd.*															
27. Bandara amuna	June 1893	864 75	69 96	54	—	—	54	—	—	—	—	—	—	—	A work undertaken by Government in consideration of the damage done to the ela by the sale of lands by the Crown without reservation.
28. Bowetenna	1895	15,101 59	5,833 82	97	—	197	294	67½	1,016 0	11	1 0	97 46	1,064 47	—	Water-rate paid. Water rate remitted on lands subsequently sold.
Awudella upper ela ...	Dec. 1891	1,997 51	—	66	—	—	66	—	—	—	—	—	—	—	No rate paid. Work done from vote allowed for sluicing village tanks.
Awudella lower ela ...	Nov. 1891														
29. Wiragahapelessa	Oct. 1891	398 74	42 76	—	—	—	—	—	—	—	—	—	—	—	No rate paid. A small work carried out by Government.
30. Atirahapitiya-ela	1893	3,710 86	2,550 0	150	—	—	150	—	—	—	—	—	—	—	No rate paid. Work done by Government in consideration of earthwork performed by shareholders.
31. Karawilahena	Oct. 1891	3,716 31	767 51	12	—	40	52	12½	235 0	5	1 0	12 53	205 1	—	Interest paid.
32. Nicholoya-ela	May 1891	238 26	72 23	60	—	—	60	—	—	—	—	—	—	—	No rate paid. A small work carried out by Government.
33. Kurakolayaya	Oct. 1895	1,144 44	766 93	26	—	—	26	—	—	—	1 0	26 24	209 92	—	Interest paid.
Radawela-ela	Apl. 1896	464 77	206 0	142	—	—	142	—	—	—	—	—	—	346 50	Instalments paid on 1896 expenditure.
34. Pelwehera	Nov. 30, 1897	4,787 46	576 70	13	—	64	77	53	532 50	25	1 0	66 81	278 63	—	Interest paid.
35. Wahacotte tank	1900	336 0	—	41	—	—	41	—	—	—	—	—	—	168 0	Amount spent is being recovered in four annual instalments.
36. Village tanks	—	25,962 34	—	—	—	—	—	—	—	—	—	—	—	—	—
NUWARA ELIYA DISTRICT.															
Kotmale.															
37. Uda Ma-ela	1887	810 0	—	122	1	2	125	—	—	—	—	—	—	—	No rate payable. These works were carried out as Eleemosynary works.
38. Koskabale-ela ...	1889	1,690 0	—	77	—	4	81	—	—	—	—	—	—	—	
39. Medakumbure-ela ...	1892	1,589 96	—	85	1	6	92	—	—	—	—	—	—	—	
40. Makandure-ela ...	1889	610 0	—	44	—	—	44	—	—	—	—	—	—	—	
41. Hapugastalawa tank ...	1887	175 0	—	19	4	4	27	—	—	—	—	—	—	—	

Uda Hewaheta.																
42. Bodi-ela ...	...	1893	75,183 90	1,598 10	24	13	105	142	—	—	—	—	—	—	—	No rate payable. These works were carried out as Eleemosynary works.
43. Waduwawela-ela ...	...	1892	4,351 20	1,995 36	254	—	100	354	—	—	—	—	—	—	—	
44. Kurunduoya-ela, No. 1	...	1892	928 41	—	447	—	—	447	—	—	—	—	—	—	—	
45. Kurunduoya-ela, No. 2	...	1892	2,730 0	—	350	—	300	650	—	—	—	—	—	—	—	
46. Ma-ela ...	...	1893	2,570 62	1,619 84	890	—	253	1,143	—	—	—	—	—	—	—	
47. Beraluwe-ela ...	...	1887	1,430 0	—	110	—	—	110	—	—	—	—	—	—	—	
48. Mapanawature-ela ...	...	1888	2,000 0	—	66	—	—	66	—	—	—	—	—	—	—	
49. Unantenne Uda-ela...	...	1887	2,290 0	—	100	—	—	100	—	—	—	—	—	—	—	
50. Agappala-ela ...	...	1885	800 0	—	64	—	—	64	—	—	—	—	—	—	—	
51. Lamasuriagama-ela ...		1892	3,165 40	1,120 3	—	137	70	207	—	—	—	—	—	—	—	Not fixed.
52. Waluganwewa ...	...	1900	9,760 0	1,505 5	524	5	30	554	—	—	—	—	—	—	1,906 25	Cost being recovered in ten annual instalments of Rs. 976 since 1900.
Walapane.																
53. Mulahal-ela ...	...	1890	2,284 0	—	253	3	47	303	—	—	—	—	—	—	—	No rate payable. These works were carried out as Eleemosynary works.
54. Eraulle-ela ...	...	1889	1,723 53	33 35	46	1	10	57	—	—	—	—	—	—	—	
55. Iluppelesse-ela ...	...	1889	1,598 0	—	40	—	—	40	—	—	—	—	—	—	—	
56. Ambeliadde-ela ...	...	1887	1,220 0	—	30	—	11	41	—	—	—	—	—	—	—	
57. Maussawe-ela ...	...	1887	1,000 0	—	46	1	—	47	—	—	—	—	—	—	—	
Total ...			259551 14	57,975 80	5784¾	268½	1,594	7,641¾	134	1,783 50	41	—	278 77	2,506 22	2,972 78	
NORTH-CENTRAL PROVINCE.																
1. Kalawewa scheme † ...	...	1884-01	778730 85		317	11589	23,477	35,383	5,446	39,515 9	494	1 0	4,603 30	45,877 80	—	Irrigation interest paid by rate in perpetuity.
		1902	46,756 83													
			825487 68	103610 2												
Maha Illuppallama †	...	1896-01	45,583 72		—	—	500	500	—	—	—	—	—	—	—	—
		1902	18,083 24													
			63,666 96													
2. Tissawewa ...	...	1879-01	29,378 23	†	—	939	115	1054	1,033	21,868 64	60	1 0	897 25	12,609 83	—	Irrigation interest paid by rate in perpetuity.
Bassawakkulam ...	...	1873-01	71,433 22	89108 54	12	254	525	791	483	7,313 25	36	1 0	251 25	3,376 66	—	
3. Nuwarawewa ...	...	1886-01	96,119 18		109	408	938	1,455	423	11,785 50	40	1 0	440 25	3,291 0	—	
4. Maha Madawachchiya †	...	1875-01	26,930 47	4,436 19	126	98	372	596	170	2,133 89	20	1 0	106 50	1,831 75	—	
		1902	—	115 70												
				4,551 89												
5. Minneri † ...	...	1896-01	80,700 12	1,206 77	638	—	—	638	—	—	—	1 0	211 50	211 50	—	
		1902	69,247 59	599 42												
			149947 71	1,806 19												
6. Rampotwilā ...	...	1893	2,447 52	—	169	—	650	819	—	—	—	—	—	—	2,208 6	By instalments at Re. 1·46 per acre.
7. Giritala ...	...	1897	5,268 86	—	115	—	1,043	1,158	—	—	—	—	—	—	—	
8. Nachchaduwa surveys and connected works †	...	1895-01	8,600 95	—	—	—	—	—	—	—	—	—	—	—	—	—
		1902	1,491 32	—	—	—	—	—	—	—	—	—	—	—	—	—

* Full amount spent up to end of 1902.

† Includes expenditure by the Director of Irrigation.

Name of each Work (grouping the Works forming connected Systems).	Date of Completion.	Outlay.		Area Benefited.				Sale of Crown Land.			Returns.				Remarks.
		Government Expenditure on Restoration or Construction.	Expenditure on Upkeep and Repairs.	Old Land benefited by Work.	New Land Cultivated consequent on Irrigation.	Further Land Irrigable by the Work.	Total Land benefited (*see Specification, if any*).	Crown Land sold since Construction or Restoration.	Amount realized by Sale.	No. of Persons who have acquired newly Irrigated Land.	Rate per Acre per Annum payable (state if exempted from payment).	Amount recovered in Rates during year ended on above date.	Total Amount recovered in Rates up to same date.	Amount recovered up to same date in repayment by instalments of cost, or portion of cost, of Work.	
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*	*m*	*n*	*o*	*p*
NORTH-CENTRAL PROVINCE—*contd.*		Rs. c.	Rs. c.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs. c.		Rs. c.	Rs. c.	Rs. c.	Rs. c.	
8. Topawewa	1896-01	925 55	170 0	245	19	—	264	19	599 0	60	—	—	—	—	
9. Mahagalkadawala, Mahakanadarawa, Sangilikanadarawa, and connected works	1901	5,014 32	—	—	—	—	—	—	—	—	—	—	—	—	
	1902	5,101 87	—	—	—	—	—	—	—	—	—	—	—	—	
		10,116 19	—												
10. Manankettiya	1902	834 17	—	—	—	—	—	—	—	—	—	—	—	—	
11. Cost of cement pipes ...	—	54,982 8	—	—	—	—	—	—	—	—	—	—	—	—	
12. Anicuts and culverts ...	—	5,844 78	—	—	—	—	—	—	—	—	—	—	—	—	
13. Village tanks and minor irrigation works	—	7,281 39	171,853 25	38,166	5043	59,629	102838	17,870	192,478 77	—	—	—	—	—	
Total ...	—	1360756 26	371,099 89	39,897	18,359	87,249	145496	25,444	275,694 14	710	—	6,510 5	67,198 54	2,208 6	
NORTH-WESTERN PROVINCE.															
KURUNEGALA DISTRICT.															
1. Kurunegala tank :—															
Repair of breach	1878	4,059 0													
Repair of breach in the bund for diverting the stream ...	1883	1,187 22													
Putting planks to the spill water ...	1884	239 61													
Repairing sluice and filling land slip	1886	249 71													
For additions and repairs ...	1890	297 29	11575 77*	68	—	—	68	—	—	—	3 50	237 40	—	2,212 64	Repayment of cost in ten annual instalments. Ninth instalment paid in 1902.
Cutting channel	1892	329 7													
Opening a channel ...	1892	2,000 0													
Completing a channel ...	1892	181 8													
Improvements to channels ...	1893	180 0													
Anicut across channel ...	1893	360 0													
Guardian's bungalow and cooly lines	1902	4,061 23†			12	—	—	12	—	—	—	—	—	—	Exempted from payment of the cost of construction.
		13,144 21													
2. Kospotu-oya anicut :—															
Construction	1872	10,783 34													
Repairs to anicut	1885	125 0													
Construction of a wall ...	1888	699 98	2935 96†	235	49	—	284	49	2,304 0	—	0 6	15 0	—	9,600 3	Cost repaid Maintenance rate of 6c. per acre is being recovered.
For raising embankment ...	1890	809 83													
Total ...		12,418 15													

3. Meddeketiya tank :—																
Restoring tank ...	...	1892	5,618 0	2,580 17	132	—	—	132	—	—	—	5 4	776 87	—	5,717 87	Payment of cost in ten annual instalments. Ninth instalment paid in 1902.
Restoring (supplementary)	...	1893	300 0													
Improvements ...	...	1893	708 0													
Raising and widening the bund	...	1898	981 26													
Do. ...	...	1900	212 67													
Do. ...	...	1901	1,014 84													
Do. ...	...	1902	2,030 97													
			10,865 74													
4. Wenoruwewa tank :—																
Restoration ...	...	1872	9,418 56	13,986 65	253	36	—	289	36	1,705 0	—	1 0	290 25	7,408 55	—	Pays rate in perpetuity.
Completion ...	...	1873	12,002 7													
Do. ...	...	1873	2,389 59													
Repairing damage done to main channel		1875	2,092 11													
Increasing head of water	...	1890	6,659 71													
Bu-ela sluice ...	...	1874	977 97													
Opening channel from Wenoruwewa		1890	2,450 0		94	—	—	94	—	—	—	1 0	98 12	—	—	do.
Constructing anicut across Bu-ela	...	1890	3,284 74													
Extension of Bu-ela channel	...	1891	999 0													
Putting a distributary gate to Wenoruwewa channel	...	1894	126 46													
			40,400 21													
5. Mediyawe tank :—																
Construction of sluice and spill	...	1879	10,380 26	6,391 47	454	243	—	697	231	2,185 0	—	1 0	1,574 92	9,972 62	—	do.
Repairing bund ...	...	1879	4,926 77													
Puddling part of bund	...	1880	987 87													
For urgent repairs ...	...	1885	63 2													
Repairing bund and natural spill	...	1886	3,506 5													
Opening two channels	...	1891	3,400 0													
Inserting distributary gate and stream crossings ...	...	1892	1,000 0													
Improving the tank ...	...	1893	4,510 0													
Repairing and improving anicut	...	1897	1,372 25													
			30,146 32													
6. Magallewewa tank :—																
Restoration ...	...	1873	50,095 30	16550 3	635	8	1,363	2,006	506	5,440 0	—	1 0	1,000 60	12,999 9	—	Pays rate in perpetuity.
Construction of channel	...	1878	9,365 0													
Restoring the channel behind the dam		1877	450 0													
Improvement of spill	...	1879	857 61													
Extending the channel	...	1880	699 92													
Construction of five masonry outlets in No. 1 channel ...	...	1884	216 8													
Completing extension of No. 1 channel		1884	699 43													
Stopping leaks ...	...	1886	369 62													
Repair of four outlet sluices	...	1887	538 24													
Improving channel ...	...	1888	444 61													
Repairing breach in No. 1 channel	...	1889	11 15													
Improving channel ...	...	1889	1,080 0													
Completing cut spill water	...	1890	59 60													
Repairs to tank ...	...	1890	100 0													
Fixing locks to distributary gate	...	1892	64 0													
Repairs to sluice No. 2	...	1896	172 80													
			65,223 36													

* Includes expenditure on Wenoruwewa tank and Bu-ela and channels connected therewith incurred by the Director of Irrigation in 1902.

† Includes expenditure by the Director of Irrigation.

‡ Includes expenditure on Galgamuwa tank incurred by the Director of Irrigation in 1902.

Name of each Work (grouping the Works forming connected Systems).	Date of Completion.	OUTLAY. Government Expenditure on Restoration or Construction.	OUTLAY. Expenditure on Upkeep and Repairs.	AREA BENEFITED. Old Land benefited by Work.	AREA BENEFITED. New Land Cultivated consequent on Irrigation.	AREA BENEFITED. Further Land Irrigable by the Work.	AREA BENEFITED. Total Land benefited (*see Specification, if any*).	SALE OF CROWN LAND. Crown Land sold since Construction or Restoration.	SALE OF CROWN LAND. Amount realized by Sale.	SALE OF CROWN LAND. No. of Persons who have acquired newly Irrigated Land.	RETURNS. Rate per Acre per Annum payable (state if exempted from payment).	RETURNS. Amount recovered in Rates during year ended on above date.	RETURNS. Total Amount recovered in Rates up to same date.	RETURNS. Amount recovered up to same date in repayment by instalments of cost, or portion of cost, of Work.	REMARKS.
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*	*m*	*n*	*o*	*p*
NORTH-WESTERN PROVINCE—*contd.*		Rs. c.	Rs. c.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs. c.		Rs. c.	Rs. c.	Rs. c.	Rs. c.	
KURUNEGALA DISTRICT—*contd.*															
7. Galgomuwa tank :—															
Construction of sluice and spill ...	1877	15,208 34	8,757 70	378	—	122	500	—	—	—	1 0	388 67	7,761 87	—	Pays rate in perpetuity.
Pitching part of bund ...	1879	296 56													
		15,504 90													
8. Karagahagedara tank ...	1892	3,014 97	—	—	—	—	—	—	—	—	—	—	—	—	No rate recovered on account of this work.
Gurussa anicut	1889	700 0	—	—	—	—	—	—	—	—	—	—	—	—	No rate recovered on account of this work. It was abandoned as the anicut was damaged. Proposed to be restored.
Cutting a piece of channel ...	1889	24 97													
Covering a piece of rock in front of anicut	1891	29 61													
Do. do. ...	1892	40 82													
		795 40													
9. Diyaturai anicut :—															
Restoration	1889	2,360 0	—	—	—	—	—	—	—	—	—	—	—	—	No rate recovered on account of this work. The work was damaged and abandoned. Proposed to be restored.
Completion	1889	256 37													
Constructing a culvert across Dambulla road	1889	54 93	—	—	—	—	—	—	—	—	—	—	—	—	—
Constructing a wall by side of channel near anicut ...	1890	56 90	—	—	—	—	—	—	—	—	—	—	—	—	—
Constructing a wall at end of anicut	1891	30 75	—	—	—	—	—	—	—	—	—	—	—	—	—
Do. do. ...	1892	63 35	—	—	—	—	—	—	—	—	—	—	—	—	—
		2,822 30													
10. Pafagoda anicut	1898	—	94 27	—	—	—	—	—	—	—	—	—	—	—	No rate recovered on account of this anicut.
11. Anicut across Deduru-oya, Batalagodawewa and channels	1890	54,999 88	31349 8	1,838	560	7,601	9,999	—	—	—	1 0	4,937 96	20,003 75	—	Pays rate in perpetuity.
	1891	70,000 0													
	1892	106,693 17													
	1893	119,309 1													
	1894	134,325 42													
	1895	32,733 79													
	1896	8,438 12													
	1897	5,861 26													
	1898	5,066 26													
	1899	8,162 34													
	1900	12,842 11													
	1901	14,013 51													

	Compensation for lands acquired ...	—	2,249 79																
		1902	14,189 60																
			588,884 26*																
	CHILAW DISTRICT.																		
12.	Deduru-oya, head sluice ...	1870	4,251 71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Munnessaram channel from Deduru-oya	1873	16,067 15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Deduru-oya, pile dam across ...	1878	2,896 29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Bandiruppuwa fields ...	1891	1,381 56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
			24,596 71																
13.	Tinipitiwewa	1872	30,000* 0																
	Extra inlet sluice	1874	4,783 83																
	Additions	1876	2,424 0																
	Repairing outlet sluice ...	1877	338 6																
	Tank repairing	1878	301 99																
	Do.	1881	501 0																
	Repairing outlet and inlet sluices ...	1884	195 0																
	Construction of spill ...	1887	3,708 27	14714 25	582¼	—	—	582¼	—	—	—	1 0	255 62	1,213 76	...	Pays rate in perpetuity			
	Alteration of the spill wall on the Kudupiti-oya	1890	578 0																
	Alteration to Kudupiti-oya spill ...	—	130 87																
	Surveys and levels, Tinipitiwewa ...	1901	722 45																
		1902	180 12																
			43,863 59*																
	PUTTALAM DISTRICT.																		
14.	Maha Uswewa tank... ...	1877	35,215 0																
	Supplementary	1877	2,312 93																
	Puddling the bund ...	1879	9,125 64																
	Deepening and sloping the sides of the extension of the channel ...	1883	550 0																
	Blasting and deepening the channel to the sluice	1883	320 0																
	Repairs to bund and sluice ...	1883	600 0																
	Restoration of the tank ...	1887	10,938 48	14756 9	294	262	541	1,097	933	10,900 0	176	1 0	260 50	2,903 25	—	Pays rate in perpetuity.			
	Distributing gates... ...	1890	306 36																
	Repairs to channel ...	1891	290 97																
	Cutting channel	1893	803 0																
	Pitching face of embankment ...	1894	932 71																
	Additions to channels ...	1900	133 66																
	Survey of subsidiary channels ...	1900	54 24																
	Do.	1901	64 11																
	Repairs and improvements ...	1901	147 22																
			61,794 32																

* Includes expenditure by the Director of Irrigation.

Name of each Work (grouping the Works forming connected Systems).	Date of Completion.	Outlay.		Area Benefited.				Sale of Crown Land.			Returns.				Remarks.
		Government Expenditure on Restoration or Construction.	Expenditure on Upkeep and Repairs.	Old Land benefited by Work.	New Land Cultivated consequent on Irrigation.	Further Land Irrigable by the Work.	Total Land benefited (*see Specification, if any*).	Crown Land sold since Construction or Restoration.	Amount realized by Sale.	No. of Persons who have acquired newly Irrigated Land.	Rate per Acre per Annum payable (state if exempted from payment).	Amount recovered in Rates during year ended on above date.	Total Amount recovered in Rates up to same date.	Amount recovered up to same date in repayment by instalments of cost, or portion of cost, of Work.	
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*	*m*	*n*	*o*	*p*
NORTH-WESTERN PROVINCE—*contd.*		Rs. c.	Rs. c.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs. c.		Rs. c.	Rs. c.	Rs. c.	Rs. c.	
PUTTALAM DISTRICT—*contd.*															
15. Wewegedara sluice	1885	329 20	—	—	—	—	—	—	—	—	—	—	—	—	—
16. Widening spill, Maha Madawachchiya tank	1901	81 0	—	—	—	—	—	—	—	—	—	—	—	—	—
17. Rebuilding sluice, Hulugalla tank ...	1901–02	216 17	—	—	—	—	—	—	—	—	—	—	—	—	—
18. Spill wall, Hiripitiya tank ...	1901	489 10	—	—	—	—	—	—	—	—	—	—	—	—	—
19. Sluice in Ihala Giribawa tank ...	1901–02	549 76	—	—	—	—	—	—	—	—	—	—	—	—	—
20. Kalingula spill, Tabbowa tank ...	1901–02	445 10	—	—	—	—	—	—	—	—	—	—	—	—	—
21. Irrigation Office, Kurunegala Kachcheri	1902	1,912 83	—	—	—	—	—	—	—	—	—	—	—	—	—
Temporary bungalows ...	1893	361 63	—	—	—	—	—	—	—	—	—	—	—	—	—
Temporary bungalow at Hettipola	1894	296 0	—	—	—	—	—	—	—	—	—	—	—	—	—
Cost of temporary bungalows ...	1901–02	963 4*	—	—	—	—	—	—	—	—	—	—	—	—	—
22. Survey of lands benefited by restoration of irrigation works ...	1895	11,984 45	—	—	—	—	—	—	—	—	—	—	—	—	—
Survey of irrigation works ...	1894–01	29,046 20	—	—	—	—	—	—	—	—	—	—	—	—	—
Cost of surveys	—	911 38	—	—	—	—	—	—	—	—	—	—	—	—	—
23. Surveys of Irrigation Works near the Northern Railway (Mi-oya) ...	1900–02	14,999 47*	—	—	—	—	—	—	—	—	—	—	—	—	—
24. Cost of cement pipes ...	1901–02	17,939 25	—	—	—	—	—	—	—	—	—	—	—	—	—
Restoration of village tanks ...	—	2,778 88	—	—	—	—	—	—	—	—	—	—	—	—	—
Repairs and maintenance of village tanks	—	—	2,951 55	—	—	—	—	—	—	—	—	—	—	—	—
Six masonry sluices in village tanks, Kurunegala District ...	1901–02	1,228 64	—	—	—	—	—	—	—	—	—	—	—	—	—
25. Cost of three tents to Irrigation Officers	—	241 25	—	—	—	—	—	—	—	—	—	—	—	—	—
Total ...	—	998402 95	126,642 99	4,681¼	1,286	9,793	15760¼	1,755	22,534 0	176	—	9,835 91	62,262 89	17,530 54	
PROVINCE OF UVA.															
Udukinda.															
1. Kande-ela ...	1856	9,587 0	1,438 63	160	1½	—	161½	—	—	—	Exempted	—	—	—	Gratuitous. No payment to be made in respect of this expenditure.
2. Diwuranwewa	1885	1,535 65	—	148	—	—	148	—	—	—	do.	—	—	—	do.
3. Punawewa	1885	2,120 87	—	118	½	—	118½	—	—	—	do.	—	—	—	do.
4. Udala-ela	1886	362 3	—	27	—	—	27	—	—	—	do.	—	—	—	do.
5. Uma-ela	1856	Not known	2,305 92	609½	100	—	709½	30	—	7	—	—	—	—	Initial expenditure paid in two instalments. The expenditure of 1900 will be recovered in ten instalments from 1903.
	1900	3,089 50													
6. Hangilielle-ela	1886	2,470 0	—	25	—	—	25	—	—	—	Exempted	—	—	—	Gratuitous. No payment to be made in respect of this expenditure.

7. Mana-ela ...	...	1886	1,580 0	—	60	—	—	60	—	—	—	do.	—	—	—	do.
8. Elamallandewewa ...	...	1886	1,200 0	—	33	—	—	33	—	—	—	do.	—	—	—	do.
9. Diyakola-ela ...	...	1887	1,205 0	—	82	—	—	82	—	—	—	do.	—	—	—	do.
10. Kabillewela-ela ...	...	1897	123 0	190 0	7	—	—	7	—	—	—	do.	—	—	—	do.
11. Elletota-ela ...	...	1886	1,200 0	—	126	—	—	126	—	—	—	do.	—	—	—	do.
12. Hingurugamuwawewa ...	...	1886	1,640 0	—	150	—	—	150	—	—	—	do.	—	—	—	do.
Yatikinda.																
13. Badulupitiya-ela ...	...	1898	3,100 0	673 13	219	—	—	219	—	—	—	—	—	—	1,065 15	Repayment to be made in ten annual instalments. First instalment recovered in 1900. (Annual instalment Re. 1·62 per acre.)
14. Alut-ela ...	...	1868	4,491 0	03 28	130	—	—	130	—	—	—	2 0	—	—	—	A rate in perpetuity of Rs. 2 per acre for interest and upkeep in lieu of repayment of the expenditure of 1898 and 1902 will be recovered from 1903.
		1880	11,853 0													
		1898	8,102 82													
		1902	4,877 75*													
15. Kendala-ela ...	...	1881	3,240 0	1,795 20	86	—	—	86	—	—	—	—	—	—	168 66½	Repayment of the expenditure of 1897 to be made in ten annual instalments. First instalment recovered in 1902. (Annual instalment Re. 1·96 per acre.)
		1887	2,090 67													
			5,330 67													
16. Yatala-ela ...	...	1890	8,070 0	—	23	—	—	23	—	—	—	1 0	23 93	211 37	—	A rate in perpetuity for interest and upkeep in lieu of repayment is recovered.
17. Mawela-ela ...	...	1890	1,010 0	227 2	32	—	—	32	—	—	—	0 10	4 65	32 55	—	Initial expenditure recovered in ten annual instalments. A maintenance rate is recovered.
18. Mailatte-ela ...		1897	102 0	—	4	—	—	4	—	—	—	Exempted	—	—	—	Gratuitous. No payment to be made in respect of this expenditure.
19. Hingurugamuwa-ela ...		1893	2,467 57	272 90	53	—	—	53	—	—	—	1 0	53 96	107 92	—	A rate in perpetuity for interest and upkeep in lieu of repayment is recovered.
20. Dehigolle Maha-ela...	...	1898	3,621 0	1,474 0	82	—	—	82	—	—	—	—	—	—	1,553 75	Repayment to be made in ten annual instalments. First instalment recovered in 1899. (Annual instalment Rs. 4·82 per acre.)
				51 86												
				1,525 86												
21. Hanwelle-ela ...	...	1885	235 0	84 4	108	—	—	108	—	—	—	—	—	—	234 75	Repayment of the expenditure of 1879 to be made in ten annual instalments. First instalment recovered in 1900. (Annual instalment 72c. per acre.)
		1897	786 50													
			1,021 50													
22. Dalada-ela ...	...	1882	126 0	—	81	—	—	81	—	—	—	—	—	—	—	Initial expenditure recovered in two instalments.
23. Halaba-ela ...	...	1887	150 0	—	8	—	—	8	—	—	—	Exempted	—	—	—	Gratuitous. No payment to be made in respect of this expenditure.

* Includes expenditure by the Director of Irrigation.

Name of each Work (grouping the Works forming connected Systems).	Date of Completion.	OUTLAY.		AREA BENEFITED.				SALE OF CROWN LAND.			RETURNS.				REMARKS.
		Government Expenditure on Restoration or Construction.	Expenditure on Upkeep and Repairs.	Old Land benefited by Work.	New Land Cultivated consequent on Irrigation.	Further Land Irrigable by the Work.	Total Land benefited (*see Specification, if any*).	Crown Land sold since Construction or Restoration.	Amount realized by Sale.	No. of Persons who have acquired newly Irrigated Land.	Rate per Acre per Annum payable (state if exempted from payment).	Amount recovered in Rates during year ended on above date.	Total Amount recovered in Rates up to same date.	Amount recovered up to same date in repayment by instalments of cost, or portion of cost, of Work.	
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*	*m*	*n*	*o*	*p*
		Rs. c.	Rs. c.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs. c.		Rs. c.	Rs. c.	Rs. c.	Rs. c.	
24. Yakdehi-ela	1856	—	10 0	72	—	—	72	—	—	—	—	—	—	—	Initial expenditure recovered.
Viyaluwa.															
25. Yapamme-ela	1888	5,000 0	—	47	—	—	47	—	—	—	—	—	—	39 72	Repayment of the expenditure of 1901 to be made in ten annual instalments. First instalment recovered in 1902. (Annual instalment 50c. per acre.)
	1901	236 61													
		5,236 61													
26. Taldena Aluṭ-ela	1880	21,873 0	4,917 75	21	14	—	35	—	—	—	1 0	34 75	332 43	—	A rate in perpetuity for interest and upkeep in lieu of repayment is recovered.
Wellassa.															
27. Gala-oya Irrigation Works ...	1890	32,414 63	3,454 30	—	—	—	—	—	—	—	0 90	470 87	1,971 44	—	A rate in perpetuity for interest and upkeep in lieu of repayment is recovered from 1899.
(*a*) East ela	1902	618 82	—	257	—	—	257	—	—	—	—	—	—	—	
(*b*) West ela	—	—	—	86	—	—	86	—	—	—	—	—	—	—	
28. Kehellandewewa	1890	12,849 16	3,187 66	42	47	—	89	—	—	—	0 50	44 73	290 98	—	*The expenditure of 1902 has to be recovered in ten annual instalments from the lands benefited by the East ela in addition to the rate in perpetuity. A rate in perpetuity for interest and upkeep in lieu of repayment is recovered.
29. Nelunwewa	1889	4,911 16	211 39	35	34	—	69	—	—	—	0 50	34 60	308 29	—	do.
30. Dununuewewa	1884	1,000 0	—	104	48	—	152	—	—	—	Exempted	—	—	—	Gratuitous. No repayment to be made in respect of this expenditure.
31. Katupelellewewa	1901	2,169 0	—	70	—	—	70	—	—	—	Exempted	—	—	—	do.
32. Makarakata	1902	712 43	—	—	—	—	—	—	—	—	—	—	—	—	Surveys.
33. Wahugoruwewewa	1902	40 15	—	—	—	—	—	—	—	—	—	—	—	—	do.
Buttala.															
34. Buttala-ela	1869	16,814 55	908 26	727	195	—	922	81	901 5	—	0 10	117 85	826 15	—	Initial expenditure recovered in ten annual instalments. A maintenance rate is recovered.
35. Okkampitiya Yoda-ela ...	1891	188,345 24	13,703 93	40	431	200	671	1307	6,597 0	—	1 0	—	—	—	A colonization scheme. A rate in perpetuity for interest and upkeep in lieu of payment will be recovered.
								1345	6,987 0						

Bintennā.																
36. Horaborawewa ...	...	1870	11,405 0	6,862 96	—	145	—	145	112	1,265 0	—	0 50	43 27	5,838 76	—	A rate in perpetuity for interest and upkeep in lieu of repayment is recovered.
37. Kudawewa ...	...	1885	14,552 0	2,960 0	—	108	—	108	93¾	1,104 25	—	0 50	11 50	376 63	—	do.
38. Udawewa ...	...	1888	1,340 0	425 50	—	69	—	69	—	—	—	0 25	5 62	121 73	—	do.
39. Medabeddewewa ...	...	1883	1,358 0	310 0	66	—	—	66	—	—	—	Exempted	—	—	—	Gratuitous. No repayment to be made in respect of this expenditure.
40. Mahatalawewewa ...	...	1882	1,087 65	474 35	8½	—	—	8½	—	—	—	—	—	—	14 53	Repayment of the expenditure of 1901 to be made in ten annual instalments. First instalment recovered in 1902. (Annual instalment Re. 1·68 per acre.)
		1901	145 0													
			1,232 65													
Wellawaya.																
41. Hambegamuwewewa	...	1891	31,887 93	1,067 49	—	140	—	140	154½	774 20	—	1 0	—	—	—	A colonization scheme. A rate in perpetuity for interest and upkeep in lieu of repayment will be recovered.
42. Sudupanawila-ela ...	...	1884	141,120 0	1,539 19	—	171	—	171	199½	2,062 25	—	1 0	170 92	1,745 20	—	A rate in perpetuity for interest and upkeep in lieu of repayment is recovered.
43. Kalupahana-ela ...	...	1884	970 0	—	7	—	—	7	—	—	—	0 10	0 73	6 59	970 0	Initial expenditure recovered. A maintenance rate is recovered.
44. Telullewewa ...	...	1887	1,000 0	67 0	2		21	23	—	—	—	—	—	—	1,067 0	Initial expenditure recovered.
45. Makerakatti tank survey	...	1902	712 43	—	—	—	—	—	—	—	—	—	—	—	—	—
46. Etimolawewa ..	...	1902	45 0	—	—	—	—	—	—	—	—	—	—	—	—	—
Total ...		—	573,294 12	50,670 76	3,956	1,504	221	5,681	3,322¾	19,690 75	7	—	1,017 38	12,170 4	4,048 41½	
PROVINCE OF SABARAGAMUWA. MAINTAINED BY GOVERNMENT. *Kolonna Korale.*																
1. Anicut across Kitulabokke-ganga ...		1891	12,665 0	5,735 52												
Do. ...		1895	99 83	—												
Channel to Ketigan-aar ...		1891	19,335 0	3,076 55	10	115	255	380	—	—	1	1 0	500 0	6,000 0	—	—
First anicut across Ketigan-aar ...																
North and South channel, Panamure		1899	18,285 95	3,046 46												
2. Second anicut across Ketigan-aar at Ambawela ...																
Channel to Hinguru-ara-wewa ...		1894	30,389 57	6,058 46	—	—	500	500	—	—	—	—	—	—	—	Crown lands not yet sold. Settlement under Waste Lands Ordinance.
Hingure-arawewa ...																
Do		1894	719 98	—	—	—	—	—	—	—	—	—	—	—	—	—
3. Anicut across Hulanda-oya at Embilipitiya, Udugama ...																
Channel to Udugama fields ...		1891	11,380 39	2,894 14	204	—	—	204	—	—	—	1 0	204 5	2,392 68	—	Pays rate in perpetuity.
Tank at Embilipitiya ...																
			92,875 72													
Anicut at Hulanda-oya and channel to Walalgoda ...		1872	9,199 84	3,778 89	243*	—	22	265	77	995 50	—	0 40	103 60	3,482 7	2,508 82	Rate 40c. per acre. (*Vide* Colonial Secretary's letter No. 256 of August 2, 1897.)

* Includes the 77 acres of Crown land sold.

Name of each Work (grouping the Works forming connected Systems).	Date of Completion.	Outlay.		Area Benefited.				Sale of Crown Land.			Returns.				Remarks
		Government Expenditure on Restoration or Construction.	Expenditure on Upkeep and Repairs.	Old Land benefited by Work.	New Land Cultivated consequent on Irrigation.	Further Land Irrigable by the Work.	Total Land benefited (*see Specification, if any*).	Crown Land sold since Construction or Restoration.	Amount realized by Sale.	No. of Persons who have acquired newly Irrigated Land.	Rate per Acre per Annum payable (state if exempted from payment).	Amount recovered in Rates during year ended on above date.	Total Amount recovered in Rates up to same date.	Amount recovered up to same date in repayment by instalments of cost, or portion of cost, of Work.	
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*	*m*	*n*	*o*	*p*
PROVINCE OF SABARAGAMUWA—*contd.*		Rs. c.	Rs. c.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs. c.		Rs. c.	Rs. c.	Rs. c.	Rs. c.	
4. Tunkema Mahawewa ...	1889	6,200 0	183 33	22	—	—	22	—	—	—	1 0	22 45	22 45	—	—
5. Alutwewa	1890	4,359 35	241 52	8	—	—	8	—	—	—	1 0	8 0	8 0	—	—
6. Epitagodawewa ...	1891	3,290 15	233 36	8	—	—	8	—	—	—	1 0	8 0	8 0	—	—
7. Hirigalkotuwewewa...	1891	3,939 20	183 76	21	—	—	21	—	—	—	1 0	21 0	21 0	—	—
8. Rambukkanawewa ...	1890	1,949 39	155 77	6½	—	—	6½	—	—	—	1 0	6 50	6 50	—	—
9. Hinguruwewa ...	1891	4,554 50	287 74	24	—	—	24	—	—	—	1 0	24 0	24 0	—	—
Atakalan Korale.															
10. Anicut across Rakwana at Malwatta and channel ...	1872–96	7,480 61	2,969 68	62	97	73	232	45	502 0	5	1 0	24 35	211 3	2,587 80	Perpetual rate will not become payable for some years yet. Sold under Sir H. Ward's minute. Most of the lands sold have restored to Crown for default.
Do. ...	1897	8 4	—	—	—	—	—	—	—	—	—	—	—	—	—
11. Wellawa and channel ...	1897	44,850 14	2,321 27	—	—	2,066	2,066	352	3,562 7	10	—	—	—	—	—
12. Beliatta amuna ...	1891	1,944 44	—	16	—	—	16	—	—	—	1 0	16 0	189 50	—	—
13. Ranwala anicut ...	1896	1,751 55	—	67	—	—	67	—	—	—	2 60	—	—	1,050 96	Pays cost by instalments.
Meda Korale.															
14. Opanake aqueduct ...	1870	938 44	439 53	25	—	—	25	—	—	—	Re. 1 an amuna	12 60	289 56	923 71	Assessment on upkeep.
15. Massenna intake ...	1889	561 68	—	161	—	—	161	—	—	—	0 55	—	—	121 28	No recoveries on account of breach of channel. (*Vide* Colonial Secretary's letter No. 272 of August 21, 1896.)
16. Mulgama tank ...	1889	7,518 17	599 89	30	—	—	30	—	—	—	1 0	29 88	—	398 56	Pays rate in perpetuity.
17. Uggalkaltota anicut and channel	1892	38,582 50	7,774 76	94½	452	197½	744	655	10,425 0	36	1 0	406 55	2,995 91	—	do.
Do. temporary trough	1899	574 0	—												
18. Utuman-ela ...	1893	198 0	—	33	—	29	62	—	—	—	1 8	—	—	179 47	Pays cost by instalments.
Kadawata Korale.															
19 Kinchigune anicut and channel	1870	6,112 88	3,684 77	47	1	—	48	—	—	—	1 0	48 68	837 11	932 16	Pays rate in perpetuity.
20. Kumbukwala amuna ...	1891	120 76	—	7	—	—	7	—	—	—	—	Exempted	—	—	Gratuitous:
21. Galagama Maha-ela ...	1892	2,370 3	—	240	—	—	240	—	—	—	—	do.	—	—	do.
22. Etawala amuna ...	1892	660 0	—	80	—	—	80	—	—	—	—	do.	—	—	do.
Nawadun Korale.															
23. Anicut across Dodanpahe-ela ...															
Channel to Ketandola ...	1889	22,050 15	3,416 37	54¾	150½	—	205¼	—	—	—	1 0	176 73	2,453 80	—	Pays rate in perpetuity.
Anicut across Ketandola ...															
Channel to Batugedara ...															
Ketandole anicut ...	1893	86 14	—	—	—	—	—	—	—	—	—	—	—	—	Old fields pay half rate.

WORKS NOT LOOKED AFTER BY GOVERNMENT.																		
Kuruwiti Korale.																		
24. Kosgoda-ela ...	...	1887	11	25	—	*Amunas.* 3	—	—	—	—	—	—	—	—	—	—	—	
25. Pusselle-ela ...	...	1887	80	0	—	10	—	—	—	—	—	—	—	—	—	—	—	
26. Tembiliyane-ela ...	...	1887	18	64	—	7	—	—	—	—	—	—	—	—	—	—	—	
27. Kiragal-ela ...	...	1889	75	0	—	25	—	—	—	—	—	—	—	—	—	—	—	
Nawadun Korale.																		
28. Iriyandolewella ...	...	1887	49	87	—	65	—	—	—	—	—	—	—	—	—	—	—	
29. Amuwele-ela ...	...	1887	57	35	—	18	—	—	—	—	—	—	—	—	—	—	—	
30. Narangode-ela ...	...	1887	23	86	—	27	—	—	—	—	—	—	—	—	—	—	—	
31. Paluwelle amuna ...	...	1888	76	76	—	10	—	—	—	—	—	—	—	—	—	—	—	
32. Ulpotawella ...	...	1888	29	99	—	7½	—	—	—	—	—	—	—	—	—	—	—	
33. Kehelbaddala-ela ...	...	1889	105	20	—	26	—	—	—	—	—	—	—	—	—	—	—	
34. Beralewella ...	...	1890	83	94	—	17	—	—	—	—	—	—	—	—	—	—	—	
35. Weweldola ...	...	1891	71	10	—	29	—	—	—	—	—	—	—	—	—	—	—	
36. Uradeniyewella ...	...	1891	25	2	—	15	—	—	—	—	—	—	—	—	—	—	—	
37. Diyawella ...	...	1891	64	89	—	4½	—	—	—	—	—	—	—	—	—	—	—	
38. Paraketiyawella ...	...	1892	59	15	—	10	—	—	—	—	—	—	—	—	—	—	—	
Atakalan Korale.																		
39. Yakeramuduketiyeulpota	...	1889	63	57	—	9	—	—	—	—	—	—	—	—	—	—	—	
40. Welkanayayeulpota	...	1889	113	14	—	—	—	—	—	—	—	—	—	—	—	—	—	
Do. ...	...	1890	99	64	—	20	—	—	—	—	—	—	—	—	—	—	—	
41. Galketadeniyeulpota	...	1890	198	92	—	32	—	—	—	—	—	—	—	—	—	—	—	
42. Weraheraulpota ...	...	1890	49	38	—	16	—	—	—	—	—	—	—	—	—	—	—	
43. Puhuarambeulpota ...	...	1891	148	31	—	14	—	—	—	—	—	—	—	—	—	—	—	
44. Kanateriyawelulpota	...	1891	196	65	—	20	—	—	—	—	—	—	—	—	—	—	—	
45. Madampe culvert ...	...	1891	67	25	—	—	—	—	—	—	—	—	—	—	—	—	—	
Kolonna Korale.																		
46. Padalangalawewa ...	...	1889	80	45	—	5	—	—	—	—	—	—	—	—	—	—	—	
Meda Korale.																		
47. Galamune-ela ...	...	1890	74	85	—	6	—	—	—	—	—	—	—	—	—	—	—	
48. Narangetanne-ela ...	...	1890	10	74	—	3	—	—	—	—	—	—	—	—	—	—	—	
49. Morahele-ela ...	...	1890	61	75	—	8½	—	—	—	—	—	—	—	—	—	—	—	
50. Mahabibile-ela ...	...	1890	21	95	—	4	—	—	—	—	—	—	—	—	—	—	—	
51. Tarawele amuna ...	...	1890	22	98	—	2	—	—	—	—	—	—	—	—	—	—	—	
52. Polwatte amuna ...	...	1890	19	65	—	19	—	—	—	—	—	—	—	—	—	—	—	
53. Pallewelaela ...	...	1891	18	97	—	14	—	—	—	—	—	—	—	—	—	—	—	
54. Metiyweleulpota ...	...	1892	28	80	—	9	—	—	—	—	—	—	—	—	—	—	—	
55. Gallelletota amuna ...	...	1892	24	50	—	7¾	—	—	—	—	—	—	—	—	—	—	—	
56. Henketiye amuna ...	...	1893	139	36	549	97 6	—	—	—	—	—	—	—	—	—	—	—	
Kadawatá Korale.																		
57. Uduwele-ela ...	...	1887	99	98	—	18	—	—	—	—	—	—	—	—	—	—	—	
58. Medawale-ela ...	...	1887	59	49	—	20	—	—	—	—	—	—	—	—	—	—	—	
59. Maha-ela at Galegama	...	1888	86	0	—	105½	—	—	—	—	—	—	—	—	—	—	—	
60. Maha-ela at Pambahena	...	1888	75	0	—	40	—	—	—	—	—	—	—	—	—	—	—	
61. Heralikandure-ela ...	...	1888	51	0	—	15¾	—	—	—	—	—	—	—	—	—	—	—	
62. Kanumulketiyeulpota	...	1888	45	0	—	7	—	—	—	—	—	—	—	—	—	—	—	
63. Nelliwala Maha-ela ...	...	1889	35	91	—	29½	—	—	—	—	—	—	—	—	—	—	—	
64. Denaganoya-ela ...	...	1889	96	23	—	22¾	—	—	—	—	—	—	—	—	—	—	—	
Kukul Korale.						Acres.												
65. Weddagala channel ...	...	1890	422	78	—	6	4	30	40	—	—	—	—	—	—	—	Gratuitous.	
Kegalla District.																		
66. Andana-ela scheme ...	...	1894	209	99	—	—	—	—	—	—	—	—	—	—	—	—	do.	
Total ...		—	265,634	94	47,631	74 —	819½	3,172½	5,461¾	1,129	15,484	57	52	—	1,712	39	18,941 61	8,702 76

All these works were executed under the vote for Urgent Minor Works.

* Includes expenditure by the Director of Irrigation.

XLIII.—1903.

SUPPLEMENTARY SUPPLY BILL, 1903.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance for making provision for the Supplementary Contingent Charges for the Year 1903."

Ordered by the Legislative Council to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 5 cents.

1903.

EXTRACT from the Minutes of the Legislative Council dated November 25, 1903.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled "An Ordinance for making provision for the Supplementary Contingent Charges for the year 1903":—

The Hon. Mr. F. R. ELLIS, C.M.G., Acting Colonial Secretary.
The Hon. Mr. H. H. CAMERON, Treasurer.
The Hon. Mr. G. M. FOWLER, Government Agent, Western Province.
The Hon. Mr. H. L. CRAWFORD, Acting Principal Collector of Customs.
The Hon. Mr. H. L. MOYSEY, I.S.O., Postmaster-General.
The Hon. Mr. W. G. ROCKWOOD, M.D., }
The Hon. Mr. S. C. OBEYESEKERE, }
The Hon. Mr. F. C. LOOS, } Unofficial Members.
The Hon. Mr. W. H. FIGG, }
The Hon. Mr. E. ROSLING, }

THE SUPPLEMENTARY SUPPLY BILL, 1903.

THE Sub-Committee to whom the Draft Ordinance for making provision for the Supplementary Contingent Charges for the year 1903 was referred having examined the items in the Schedule, and having obtained the necessary explanations from the Acting Colonial Secretary, recommend that the expenditure specified in the Bill be sanctioned.

At the instance of the Acting Colonial Secretary, the Sub-Committee further recommend that the additions and reductions in the annexed list be made.

F. R. ELLIS.
H. H. CAMERON.
G. M. FOWLER.
H. L. CRAWFORD.
H. L. MOYSEY.
W. G. ROCKWOOD.
S. C. OBEYESEKERE.
F. C. LOOS.
W. H. FIGG.
E. ROSLING.

Legislative Council Chamber,
Colombo, December 2, 1903.

Annexure.

LIST OF ADDITIONS AND REDUCTIONS.

	Additions. Rs. c.	Reductions. Rs. c.
SECRETARIAT.		
Printing Branch.		
Daily pay and piecework	1,500 0 ...	—
Paper	3,500 0 ...	—
PROVINCIAL ADMINISTRATION.		
Northern Province.		
Salary of the late District Mudaliyar of Tunukkai and Karunaval from October 1 to December 31, 1898 (re-vote)	74 96 ...	—
Fencing Pearl Fishery, Adappankulam	200 0 ...	—
Southern Province.		
Matara: Travelling allowance to clerks, &c. ...	300 0 ...	—
Hambantota: Repairing damages to bunds of tanks in the Yala game sanctuary	50 0 ...	—
North-Western Province.		
Compensation for improvements of certain lands at Nadulgomuwa	5,074 32 ...	—
North-Central Province.		
Travelling allowance to interpreters, &c. ...	850 0 ...	—
CUSTOMS DEPARTMENT.		
Miscellaneous	300 0 ...	—
LEGAL DEPARTMENTS.		
Supreme Court.		
Contribution of the Chief Justice to the Widows' and Orphans' Pension Fund for May 5 to 31, 1902 (re-vote)	79 84 ...	—
Attorney-General.		
Expenses of the Harvey case	10,000 0 ...	—
Fiscals.		
North-Central Province: Witnesses' expenses ...	— ...	516 80
Do. Batta to headmen escorting prisoners	190 0 ...	—
Carried over ...	22,119 12	516 80

	Additions. Rs. c.	Reductions. Rs. c.
Brought forward ...	22,119 12	516 80
POLICE.		
Southern Province.		
Expenses in connection with the Dondra riot ...	1,207 50	—
Central Province.		
Expenses of police employed on cacao duty ...	—	1,000 0
Province of Uva.		
Station allowance to clerks	35 0	—
MILITARY EXPENDITURE.		
Volunteer Regiment.		
Forms and tables purchased for the annual camp ...	4,504 0	—
Coast Artillery camp	—	3,000 0
MISCELLANEOUS.		
Expenses of Cacao Commission	376 91	—
Cost of preparing an Index to the Revised Edition of Ordinances	900 0	—
Marine Biological Laboratory	31 25	—
RAILWAY DEPARTMENT.		
Accountant's Department.		
Preparing and printing rate tables for goods traffic ...	700 0	—
Locomotive Department.		
Wages of workmen	10,000 0	—
Stores and materials	15,000 0	—
Traffic Department.		
Repairs to furniture, &c.	500 0	—
Ways and Works Department.		
Stores and materials	4,000 0	—
New Works.		
Blasting operations, Kadugannawa incline ...	2,736 0	—
Purchase of wire tramway, Diyatalawa	17,569 0	—
Renewing bridge at 18 miles 18 chains	—	4,000 0
Improvements to dangerous localities, Bandarawela Extension	—	1,500 0
PUBLIC WORKS ANNUALLY RECURRENT.		
Maintenance of King's Pavilion, Kandy ...	98 30	—
Additions and improvements to Government buildings...	1,923 50	—
PUBLIC WORKS EXTRAORDINARY.		
Medical aid hospital, Dikoya	8,000 0	—
Alterations to new Dutch Record Office ...	143 0	—
Office for Superintendent, School Gardens ...	—	190 0
South Coast road extension (on account) ...	2,000 0	—
Adjusting Peradeniya bridge	5,000 0	—
Ferry boats	285 0	—
New shelves for General Post Office	1,000 0	—
Repair of damages to H.M.S. "Fox" caused by a collision in the Colombo Harbour	668 74	—
Electric fittings, Queen's House	3,900 41	—
Total ...	102,697 73	10,206 80
Deduct reductions ...	10,206 80	—
Nett additions ...	92,490 93	—

XLIV.—1903.

CACAO COMMISSION.

REPORT of the COMMISSIONERS appointed to inquire and report (1) whether since the publication of the Prædial Products Thefts Commission Report in 1895 there has been any material increase in the number of cacao thefts; (2) whether such increase, if any, could have been prevented by the exercise of greater diligence and care on the part of growers, or by more rigid enforcement of the existing law by Government officials; (3) whether the system of rural police has been sufficiently utilized, and whether, when utilized, it afforded adequate and satisfactory means of protecting produce from theft; and (4) whether special legislation is necessary or desirable, and if so what form it should take.

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 50 cents.

1904.

COMMISSION.

IN the Name of His Majesty EDWARD THE SEVENTH, by the Grace of God, of the United Kingdom of Great Britain and Ireland, and of the British Dominions beyond the Seas, King, Defender of the Faith.

By His Excellency the Right Honourable Sir J. WEST RIDGEWAY, Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, Knight Commander of the Most Honourable Order of the Bath, Knight Commander of the Most Exalted Order of the Star of India, Governor and Commander-in-Chief in and over the Island of Ceylon, with the Dependencies thereof.

WEST RIDGEWAY.

To the Hon. Mr. ALFRED GEORGE LASCELLES, K.C., Attorney-General, Chairman; the Hon. Mr. JOHN PENRY LEWIS, Acting Government Agent, Central Province; A. C. KINGSFORD, Esq., Chairman, Planters' Association, Kandy; PETER DE SARAM, Esq.; T. C. HUXLEY, Esq.

GREETING.

WHEREAS We deem it expedient that a Commission should issue to inquire and report (1) whether since the publication of the Prædial Products Thefts Commission Report in 1895 there has been any material increase in the number of cacao thefts; (2) whether such increase, if any, could have been prevented by the exercise of greater diligence and care on the part of growers, or by more rigid enforcement of the existing law by Government officials; (3) whether the system of rural police has been sufficiently utilized, and whether, when utilized, it afforded adequate and satisfactory means of protecting produce from theft; and (4) whether special legislation is necessary or desirable, and if so what form it should take:

Now know Ye that We, the said Governor, reposing great trust and confidence in your prudence, ability, and fidelity, have, with the advice of the Executive Council, in pursuance of the powers in Us vested by the Ordinance No. 9 of 1872, nominated, constituted, and appointed, and by these presents do nominate, constitute, and appoint you, ALFRED GEORGE LASCELLES, JOHN PENRY LEWIS, A. C. KINGSFORD, PETER DE SARAM, and T. C. HUXLEY to be Our Commissioners for the purpose aforesaid, with authority to exercise all the powers which Commissioners appointed under the said Ordinance may lawfully use and exercise.

And We do hereby authorize and empower you Our said Commissioners to make all necessary inquiries into the said matter and to report to Us under your hands within four months from this date, or so much earlier as may be possible, upon the matter referred to you as aforesaid.

Given at Nuwara Eliya, under the Seal of this Island, this Seventeenth day of February, in the Year of our Lord One thousand Nine hundred and Three.

By His Excellency's command,

EVERARD IM THURN,
Colonial Secretary.

PART I.

REPORT OF THE CACAO THEFTS COMMISSION.

WE the undersigned were appointed a Commission for the purpose of inquiring into and reporting (1) whether since the publication of the Prædial Products Thefts Commission Report in 1895 there has been any material increase in the number of cacao thefts; (2) whether such increase, if any, could have been prevented by the exercise of greater diligence and care on the part of growers, or by more rigid enforcement of the existing law by Government officials; (3) whether the system of rural police has been sufficiently utilized, and whether, when utilized, it afforded adequate and satisfactory means of protecting produce from thefts; and (4) whether special legislation is necessary or desirable, and if so what form it should take. Your Excellency was subsequently pleased to direct us to inquire and report whether any description of fencing would be of service in protecting cacao from thefts.

2. In pursuance of these inquiries we issued question papers to the superintendents of the principal cacao estates.

The form of question paper and the answers to the more important questions will be found in a tabulated form in Appendix A to this report. Replies were received in nearly every case.

3. Your Commissioners also held five meetings at Kandy, one in Matale, and two in Colombo. At these meetings twenty-four witnesses, some of whom had previously given written replies to the question forms, were examined, and their evidence will be found recorded in the printed Minutes of Evidence.

4. In inquiring whether there has been any material increase in the number of thefts of cacao since the Report of the Prædial Products Thefts Commission in 1895, your Commissioners were met by the difficulty that no one of the witnesses whom we examined was in a position to quote figures as to the amount or proportion of the crop which was stolen. The difficulty of estimating the losses by theft is due to the circumstance that thefts of small quantities of cacao are in many cases unnoticed, or if noticed by the watchmen are not reported to the superintendent.

5. The representatives of 45 estates replied in writing to our question whether thefts had increased or decreased. Of these, 6 replied that thefts increased or decreased from time to time with the rise or fall of the price of cacao, 9 reported that they were unable to give a definite answer or that there had been no change, 12 that thefts had decreased, 9 that they had increased, and 9 that there had been little or no stealing on the estates in their charge.

6. Of the witnesses whom we orally examined, but one complained that there had been any material increase in thefts.

7. Your Commissioners have no hesitation in reporting that in their opinion thefts of cacao have not increased, but have decreased since 1895. How far this is to be attributed to the fall in the market price of cacao, which may be a temporary cause, we are unable to say. In the district of Matale the witnesses whom we have examined are disposed to attribute the improvement to the activity of Mr. Alexander, the Assistant Government Agent, which they suggest may also be only a temporary cause.

8. While it is clear that from one cause or another thefts of cacao have decreased rather than increased in recent years, we are not disposed to deny the existence or to minimize the gravity of the mischief. On the contrary, we are satisfied that the complaints of cacao growers are on the whole well founded. That cacao stealing still prevails to a considerable extent in the District of Kandy is proved by information recently received from the Police Magistrate of Kandy to the effect that in the present season up to 1st December there have been 47 charges of cacao stealing in the Police Court of Kandy, 30 of which have resulted in convictions.

9. Besides the pilfering which in some districts seems to be of constant occurrence, cases have been brought to our notice in which large quantities of cacao, 400, 500, or 600 pods, have been stolen at a time.

10. The question "whether such increase, if any, could have been prevented by the exercise of greater diligence and care on the part of growers, or by more rigid enforcement of the existing law by Government officials," does not strictly arise, but, in view of the opinion which we have expressed with regard to the prevalence of cacao stealing, we are of opinion that this point should not be passed over.

11. Cacao growers, in our opinion, must be acquitted of any want of diligence and care in protecting their property. Watchmen are almost universally employed, and in some cases at very heavy cost. Mr. G. J. Murray, for example, who is in charge of the Pallekele group of estates of 3,100 acres, *besides having the rural police*, employs as many as 30 watchmen at a cost of Rs. 3,000 per annum. Mr. James Martin, in charge of 1,137 acres, spent Rs. 3,600 in watching his crop, and even went to the expense of importing Mohammedans from the Punjab to serve as watchers. This experiment was successful at first, but we learn from Mr. Martin that the efficiency of these watchmen was short-lived. On another estate, that in charge of Mr. Holloway, Afghan watchers were employed at a cost of Rs. 20 each per month.

The evidence with regard to the efficiency of estate watchmen is to the effect that on the whole they do their duty fairly well, but they are necessarily recruited from a class from which a high standard of honesty or efficiency cannot be expected.

12. The evidence which we have collected does not disclose any failure on the part of Government officials in enforcing the existing law. It is generally admitted that during the last two or three years great activity has been shown, especially in the Matale District, in suppressing cacao thefts, and that this activity has been followed by excellent results.

13. In the course of our inquiry cases were brought to our notice in which it was complained that persons charged with cacao stealing had been acquitted when the evidence warranted their conviction. It is not, we conceive, part of our duty to sit in appeal on the decisions of Police Magistrates, but we may record our opinion that the complaint is not wholly unfounded.

Mr. Borrett attributes these failures of justice to the non-appreciation on the part of some Magistrates of the probative value of evidence; he states that Magistrates in some cases will not convict without direct evidence of theft, and that they hesitate to draw the legitimate inference when a theft has been proved and the accused is found in possession of freshly cut pods.

The complainant's proper remedy in such cases is to obtain the sanction of the Attorney-General to appeal to the Supreme Court.

14. We would here recommend the adoption of a suggestion which has been made that a special Magistrate should be appointed to itinerate in the cacao districts during the cacao harvest. We agree that the personality of the Magistrate who has to deal with cases of cacao thefts is an important factor in the problem. We are of opinion that the presence of an active and experienced Magistrate in the cacao districts will be followed by good results.

15. Of the fifty-two estates from which we have received replies, it appears that in ten cases only were the rural police employed. In four cases the police are reported as more or less inefficient, in four as satisfactory, whilst in two cases the replies are silent as to the efficiency of the police.

The conclusion to which we have arrived on this head is that when the rural police is placed under strict supervision, and is worked in conjunction with the village headmen, the result has been satisfactory, but that without strict supervision and co-operation with the headmen the epithets "useless" and "worse than useless," which have been applied to the rural police, are not wholly out of place.

16. The employment of rural police in practice imposes upon the Government a far heavier burden than the moiety of the cost of the force which Ordinance No. 16 of 1885 contemplated should be borne by Government.

We publish in the Appendix (No. 4) a statement by Assistant Superintendent Dowbiggin of the cost of the maintenance of a force of rural police during the cacao season in two groups of estates in the Dumbara district.

It will be seen that the total cost amounted to Rs. 3,271·50, or about Re. 1·47 on the acreage of cacao protected.

Of the total of Rs. 3,271·50, no less than Rs. 2,491·50 is represented by items towards which the proprietors of the estates are not called upon to contribute. The actual cost of the police, half of which is borne by the proprietors, amounted to only Rs. 780. The Government therefore paid, of the total amount of Rs. 3,271·50, Rs. 2,881·50, and the proprietors only half of Rs. 780, or Rs. 390.

The amount of Rs. 2,491·50 which is wholly paid by the Government is made up of the following items:—

	Rs.	c.
Cost of oil	4	50
Batta to policemen on both groups	494	0
Batta to seventeen headmen	998	0
Rewards to headmen	995	0
Total ...	2,491	50

It is true that the last two items, which account for Rs. 1,993 out of the Rs. 2,491·50, represent payments to headmen rather than the actual cost of rural police. But if the co-operation of the village headmen is essential to the efficiency of the rural police, and the amount paid to the headmen is proper, the fact remains that the employment of rural police for the protection of cacao estates imposes an unduly heavy burden on the Public Treasury.

17. If the present system of protecting cacao by means of rural police working in conjunction with the village headmen is extended, it will be necessary to take steps to secure a more equal division of the cost between the Government and the proprietors. If the proprietor, in addition to paying the cost of his own watchmen and half the cost of the rural police, were called upon to pay half, or indeed any considerable proportion of the batta and rewards to village headmen, we doubt whether there would be many applications for the services of the rural police. Moreover, if the demand for the services of the rural police should become general, it seems certain that the police authorities would find themselves unable to provide a sufficient number of trustworthy men and to furnish the requisite supervision.

18. The result seems to be that the system of protecting cacao estates by means of rural police is only effective when the co-operation of village headmen is secured, and that when the remuneration of the village headmen is added to the cost of the rural police the total cost, in whatever proportion it may be divided between the Government and the proprietor, is prohibitive.

19. The evidence before us shows that in some villages, such as that of Katugastota, cacao stealing is systematically carried on, whilst in other villages it is of comparatively rare occurrence. We recommend that in cases where it is proved that cacao stealing is generally and systematically carried on the experiment should be tried of quartering punitive police during the cacao season.

20. We now proceed to consider the question whether any special legislation is necessary, and in this connection it is desirable to state briefly the present condition of the law with regard to cacao stealing, and the particulars in which it is urged that the present law is inadequate.

21. Under section 3 of Ordinance No. 9 of 1885, as amended by Ordinance No. 22 of 1886, the possession of the unripe fruit of the cacao tree is an offence unless the possessor gives a satisfactory account of his possession. So far as we have been able to learn the protection given by this provision

to the cacao grower is worthless, for the simple reason that unripe cacao, being of inferior value, is not stolen unless by accident.

Section 4 of the same Ordinance prohibits the purchase of produce, including the fruit of the cacao tree, from estate labourers; this provision in theory is sound, but owing to the difficulty of proving the circumstances of any sale the protection given by this section is illusory.

Under section 2 of the same Ordinance persons found loitering or lurking about any plantation are guilty of an offence unless they give a satisfactory account of themselves. Prosecutions under this section have been infrequent.

22. With these exceptions, the offence of stealing or receiving cacao is on the same footing as the theft of other things which are the subject of larceny.

23. The obstacles which stand in the way of the successful prosecution of persons for stealing cacao or receiving it knowing it to have been stolen may be summarized as follows :—

(*a*) Owing to the facilities for concealment which are offered by a cacao plantation, it is not often possible to detect the thief red-handed in the act of stealing.

(*b*) When the offender is caught with freshly gathered cacao in his possession in the immediate neighbourhood of a plantation, a prosecution often fails because it cannot be shown that cacao has in fact been stolen, and even if this is proved it is impossible to establish the identity of the cacao stolen with that found in the possession of the accused.

(*c*) The facilities for disposing of stolen cacao are very great. Besides the owners of small gardens, itinerant Moorish traders, boutique-keepers, and others are always ready to buy cacao without asking questions.

24. We have carefully considered the provisions of various Colonial Statutes, notably those of Grenada, for the suppression of thefts of prædial produce, with the view of ascertaining whether their provisions are applicable to the local circumstances of Ceylon. We are of opinion that the provisions of the Grenada Ordinance with regard to the regulation of sales of cacao might be adopted in Ceylon with advantage to the cacao grower and without hardship to the general public.

We recommend legislation on the following lines :—

(1) The Ordinance to apply only to districts proclaimed for the purpose.
(2) The purchase of cacao prohibited except by licensed dealers.
(3) Sales only to take place in licensed premises.
(4) Licenses to purchase cacao to be issued by the Government Agent or Assistant Government Agent, who may refuse to issue licenses, or cancel licenses already granted, subject to an appeal to the Governor in Executive Council.
(5) Sale or delivery of cacao only to take place between sunrise and sunset and at the licensed premises.
(6) Licensed dealers to buy only from persons known to them personally.
(7) Purchase from children prohibited.
(8) Licensed dealers to keep books in prescribed form showing details of delivery and disposal and other particulars.
(9) Power of police officers to inspect licensed premises.
(10) Licensed dealers prohibited from buying "wet cacao," *i.e.*, cacao in the pod, or cacao beans covered or partly covered with pulp.

25. While we believe that legislation on the lines we have sketched will go some way towards checking cacao stealing by preventing the purchase of cacao by irresponsible persons, it is necessary to consider the more drastic remedies which have been suggested. Mr. Alexander strongly advocated a system of which the prominent features are the registration of all cacao gardens and the prohibition of the removal of cacao without a "tundu" or pass from the headman. This scheme is practically the same as that which is elaborated in the schedule to the report of the Prædial Thefts Commission in 1895.

26. The Commissioners, however, did not recommend the adoption of this system. They state in paragraph 23 of their report: "They (*i.e.*, the Commissioners) do not, however, recommend its adoption at present, as the evidence does not establish that thefts of these products are so general or of such a magnitude at the present time as to justify the introduction of a measure of such stringency, involving as it does considerable interference with the ordinary course of trade."

27. The reasons which induce the Commissioners to reject this scheme are now at least as strong as they were in 1895, and we do not think that present circumstances would justify the introduction of this scheme.

28. The views of the Matale Planters' Association are expressed in the following resolution which was unanimously passed by the Association: "We the undersigned are of opinion that the law as it now stands is not sufficient for the protection of cacao proprietors. We would therefore respectfully suggest some amendment of the Prædial Products Ordinance, which, while continuing to make possession of *green* cacao without a satisfactory account of such possession an offence, might also provide against the dishonest possession of *ripe* and *cured* cacao. We should also be grateful for any provision against receivers which the Government may be disposed to grant."

29. We are at one with the Association in believing that when a person is found in possession of cacao which may reasonably be supposed to be stolen there is nothing unfair in calling upon him to show that he came by it lawfully. But when may cacao reasonably be supposed to be stolen? We cannot, however, go the length of agreeing with the Association that any person having cacao in his possession, whether ripe or unripe, cured or uncured, fresh or stale, could fairly be called upon to account for his possession. To enact such a provision would be to place a very wide power of harassing the public in the hands of those charged with the execution of the measure.

30. The practical difficulty is to define the circumstances in which cacao may reasonably be presumed to be stolen. It was suggested to us that the word "uncured" should be substituted for the word "unripe" in section 3 of Ordinance No. 9 of 1885. The section would then run: "Whenever the uncured fruit of the ..... cacao tree ..... shall be found in the possession of any person who is unable to give a satisfactory account of his possession thereof, such person shall be deemed and adjudged guilty of an offence," &c.

We are satisfied that this suggestion is impracticable, and the adoption of the word "uncured" in the section would give rise to much uncertainty and difficulty.

31. In the Grenada Ordinance the term "wet" cacao is used to denote recently gathered cacao, and the term is defined to mean "cacao in the pod or cacao beans covered or partly covered with pulp."

32. We have come to the conclusion that the best means of securing the punishment of cacao thieves and receivers of stolen cacao would be to enact a section to the following effect:- "Where any person is found in the possession of wet cacao, which may reasonably be supposed to have been stolen he shall be guilty of an offence, unless he proves to the satisfaction of the Magistrate that he came by the same lawfully."

33. It is true that we have not attempted to define the circumstances under which cacao may reasonably be supposed to be stolen. We doubt whether it is possible to do so, but in the majority of cases we believe that no difficulty will arise. In the case which is of frequent occurrence, where a villager is caught on or coming from the direction of a plantation carrying wet cacao, there is no hardship in calling upon him to account for his possession of cacao, and if he fails to do so the inference that he stole it is irresistible.

34. The efficacy of the measure which we have recommended will largely depend upon the interpretation which Magistrates and the Supreme Court put upon the words "reasonably supposed to have been stolen." If Magistrates construe the words with moderation and good sense, and take action only in cases where the circumstances fairly give rise to the presumption of theft, we have no doubt that they will receive the support of the Supreme Court.

35. With reference to the inquiry whether any description of fencing would be of service in protecting cacao from thieves, we are of opinion that no description of fencing will have this effect to any useful extent. There is no fence which can be grown or constructed at reasonable cost which a human being cannot penetrate or surmount.

ALFRED G. LASCELLES,
Chairman.

SAMUEL HAUGHTON,
Government Agent, Central Province.

A. C. KINGSFORD.

T. C. HUXLEY.

PETER DE SARAM.

December 31, 1903.

PART II.

MINUTES OF EVIDENCE.

THE Commission held its first meeting at Kandy on 16th May, 1903, when there were present the Chairman and Messrs. Huxley, Kingsford, and Peter de Saram.

After the Commission and the Governor's letter of 20th February, 1903, had been read by the Secretary, the Commissioners proceeded to hear evidence.

Mr. H. D. Garrick was examined, and said :—

I manage 74 acres for the Ukuwella Estates Company, and have done so for three years nearly.

There has been a fair number of serious thefts. The number is serious for the small size of the estate. I can give no estimate ; several hundredweights are stolen a year. The yearly yield is 160 cwt. average ; 200 or 300 pods, or even 400, have been stolen at a time on two or three occasions.

I have detected a good number of robberies. I have obtained convictions in all cases but one taken into court. The return of numbers of convictions is at the Matale Kachcheri. I have five watchers at night in full crop time. They cost Rs. 394. Owing to my estate being separated, watching is very difficult, except the ordinary patrol system. Thefts were less last year than previously, far less. That is due largely to extra efficiency in headmen, and the fear of being caught and the knowledge that I obtained convictions, and to the fall in price of cacao. The price has fallen from Rs. 100 to Rs. 60.

The thieves are Sinhalese villagers. During cacao crop at least two caddies are started—they last during the crop only ; these are the shops of the receivers.

I know one man in a biggish way whom I suspect of being a receiver. The keepers of small caddies are Sinhalese. They profess to have cacao of their own. Three men told me they leased the same garden in the same year. There are a large number of small gardens in the neighbourhood.

I do not know if they are low-country Sinhalese who steal. The boutiques are ostensibly opened for sale of silleru, &c. I do not know who are the buyers in Colombo. I should not say they bought from the owners of estates. Moormen buy 10 per cent. of the crop. I should say the same men who buy the 10 per cent. at higher prices are receivers. They pay more because they "fake" the cacao.

The weak point of the present Ordinance is that possession of cacao is not in itself an offence.

I had two cases six weeks ago. One well-known thief was seen taking pods by my weeding contractor. It is useless on one witness's evidence to take a case. Three days later my cacao watcher saw the same man. Most robberies are early in the morning ; some are at night. I had very few postponements when I took cases in Matale Police Court. They were generally postponed one day to subpœna accused's witnesses.

Mr. De Saram : Headmen should take accused's witnesses along with him to the Police Court.

Mr. Garrick : I think the law inefficient. I do not know how it could be amended. I never sell to the villagers. I sell whole black crop to a Moorman trader in Matale. I would approve shifting onus of proof on to the possessor of uncured cacao. A native owner would generally sell both cured and uncured. He would send it uncured to Matale. It would not be a hardship on small growers to have to account for possession.

Mr. Kingsford : That would be very stringent?

Mr. Garrick : I would approve restricting sale of cacao within the gravets of the towns. I do not think the punishments in Police Courts are sufficient. The thieves are a well-known class—low class Tamils. The only case I lost was where my watcher was lying.

The police patrols I found useless—the rural police that is.

Good headmen are a great help. I myself took all the cases to the Police Court : not the headman.

Since Mr. Alexander has been in the district theft has decreased. Sentences of three or six months' rigorous imprisonment are passed. No lashes are ordered.

It would be a good thing to shift onus of proof of possession of cacao, *ripe* and *unripe*, on to possessor. We cut the cacao ; the thieves pull it off.

The sitting then adjourned.

Second Sitting : held at the Victoria Commemoration Buildings, Kandy, on June 6, 1903.

Present:—The Hon. Mr. A. G. Lascelles, K.C., Attorney-General (in the Chair), Mr. T. C. Huxley, Mr. Eric Watson (Secretary).

Mr. H. Percy Borrett, examined by the Attorney-General.

You have been in practice in Kandy for some time?

Witness : Nine years.

And I suppose you have had considerable experience of cacao stealing in the district?—Yes, of the cases which have come into court.

And you have often been engaged in these cases and seen a good many?—Yes, I ought to say that a few years ago I went into the matter more into detail and propounded a scheme involving the consideration of fresh legislation. I have not been able to look up the papers I have. Of course,

I only knew yesterday I would be called. If that was wanted or you called for it on a later day I could get it.

Can you give the outlines of your scheme ?—My scheme was practically on the cattle voucher system.

Explain the details of that, please ?—That no one should be allowed to buy cacao without being licensed.

Licensed from the Government Agent ?—Yes, and the buyer would have to record particulars of his purchase, so that the sale would be before the Government Agent on a voucher. And that all native gardens under a certain acreage should be registered, so that it would not affect the *bonâ fide* cacao planters, who presumably are not thieves. Those are the main principles of my system.

That is rather cumbersome ?—It must be. With regard to the principle of the whole thing, my opinion is that I do not believe that cacao stealing is carried on in sufficient quantity to warrant any such Ordinance.

Do you think it has increased during the last few years ?—I think it has decreased.

Decreased ! And to what cause do you attribute the decrease ?—Partly to agitation on the part of the planters, and partly to the work of the Government Agent and the Assistant Government Agent.

Has the decrease been a material one, do you think ?—Yes, I think it has ; that is admitted by every one, and I really do not believe that any fresh legislation is necessary. I do not think there is more stealing of cacao than there is stealing of tea.

Or cocoanuts ?—I do not know anything about cocoanuts. Stealing is the inevitable result of having a cacao estate. If you have an estate of 600 acres, you are bound to lose a certain amount unless you keep ten thousand men to look after it.

Have you had any experience of the efficiency of the police ?—The police or the Police Magistrate ?

The police ?—No.

I think in some parts they have had police especially to watch estates ?—Rural police.

You have had no experience of them ?—Except I know it has decreased where they have had rural police.

And the estate watchmen, are they efficient, do you think ?—I suppose so, but there is not enough of them ; that is all. Of course, it might be advisable to amend the Prædial Products Ordinance by including ripe cacao.

A man should be obliged to account for any cacao in his possession ?—For cacao in his possession, either ripe or unripe. That would be bound to be considered in the drafting of an Ordinance on the voucher system, although I do not think such an one is necessary. Then, I think the only other point I wish to make is that I do not think the Police Magistrates act in such a way as to decrease the theft of cacao.

How do you think they might act ?—The reason I say it is they do not understand the probative value of evidence. Take the example of tea or cacao. Unless a cacao planter goes into court and says to the Police Magistrate, "I saw that particular pod or particular tree growing in the nursery," the accused is at once acquitted. It is not sufficient to say, "I found that cacao had been cut off my estate. This man was found in possession of fresh-cut pods this morning and cannot account for them." That is neither here nor there. I give that as my own experience as a proctor in cases. Whereas a lawyer would draw the natural inference that that was quite sufficiently strong.

Witness : You must be guided by the circumstances of each case. You cannot lay down a hard and fast rule.

Witness : And I might also mention the ridiculous punishments which are very often passed, viz., because they find only one cacao pod they fine a man 10 cents.

Witness : It is done by the amateur Police Magistrate, who argues : "This man has stolen one pod, and therefore this man ought to be fined 10 cents." He does not look at it in the light of a deterrent.

How do you propose to remedy that ?—I do not know. They ought to be licensed.

Have there been any cases of conviction for loitering or lurking on a plantation under that Ordinance of 1885 ?—I do not know of any.

Mr. Huxley : I do not think that provision is generally known.

If there had been any cases in Kandy you would have known of it ?—We have had cases in Kandy of a man being in possession of unripe cacao.

If you added to the word "unripe" the words "or uncured," do you think that would strengthen the law ?—It may be ripe and cured ?

Mr. Huxley : It is no offence if it is ripe.

Witness : It is my deliberate opinion that no fresh legislation is necessary at all. I do not think cacao stealing sufficiently warrants it.

Mr. Huxley : Why ?

Witness : Because I consider the cacao planter is well protected at present.

Mr. Huxley : Do you not think that that is due to the Government Agent and Assistant Government Agent ?

Witness : Yes, certainly.

Mr. Huxley : We have got an active Assistant Government Agent now.

Witness : You do not want to pass legislation that the Assistant Government Agents should do their duty. If they do, no fresh legislation is wanted except an amendment of the Prædial Products Ordinance. There is tea stolen every month out of the tea factory never accounted for or found out, the only good being in agitation.

The Attorney-General : Have you read the Ordinance in force in the West Indies ?—I read it and others four years ago, when I went into the matter.

In Grenada, (I am reading from the proceedings of the last Commission, page 9), and there the system is the dealers are licensed, and no one is allowed to purchase or receive cacao unless he is licensed. And then there is a penalty for any one who sells or offers for sale and for the dealer who buys on Sundays or at any time except between the hours of 6 in the morning and 6 in the afternoon, no other day or at no place except at the premises which are licensed, and then a number of clauses about having all sales registered. I do not know if there is power of searching any person on the road.

Mr. Huxley : I do not think that we have it here.

Witness : There is power to search given under the Penal Code.

The Attorney-General : On reasonable suspicion ?—Yes.

Well, you are not in favour of any material alteration to the existing law ?—Except possibly an amendment of the Prædial Products Ordinance.

And you know of no cases of loitering ?—It would be a good thing if you submitted your scheme in writing if you have it, and then we can see the details.

Mr. H. L. Dowbiggin, examined by the Attorney-General.

You are Assistant Superintendent of Police. How long have you been in Kandy ?—Two and a half years.

And you have seen a good deal of cacao stealing in that time ?—Yes, and inquired into a good many cases on the spot.

Would you say that in the two and a half years that you have known Kandy, cacao stealing has increased or decreased ?—Decreased.

Materially ?—Yes.

And to what do you attribute that decrease ?—To greater energy on the part of the headmen, who, I suppose, have been prompted to more energy by their superior officer.

The Government Agent or the Assistant Government Agent?—Yes, and where estates have complained of great thefts and rural police have been established : no doubt they have put a stop to thefts there on the estates where they have been established.

How do the headmen stop the thefts ? How do they set to work ?—Patrolling.

At night ?—Early in the morning and in the evening.

Has the number of convictions for stealing increased ? Have you gone into that ?—I went into it last year ; the number of convictions I regard as quite stationary.

I mean the number altogether. I do not mean the proportion of them, but, have the gross totals of convictions increased ?—I should say they have remained stationary.

Who are the thieves as a rule ? Are they coolies on the estates ?—Generally speaking, they are villagers. When thefts take place in small quantities probably coolies are responsible, but the large thefts are committed by villagers, who raid an estate with bags and take away a considerable quantity. In some districts Moormen are the culprits.

Those are travelling Moormen ?—No, Moors resident in Pallakele bazaars near Pallakele. Some are travelling Moormen and hawkers.

How do the thieves dispose of the stolen produce ?—To these hawkers.

In small quantities, I suppose ; a few pods at a time ?—Yes, when the rural police were stationed at Pallakele they put a stop to the stealing by driving these hawkers out of the bazaars ; they would not allow them to come near the estate.

Would any alteration in the law be of any assistance to the police ?—Yes.

Have you any suggestions as to that ?—Dealers should be licensed and have registered premises to buy cacao and their name fixed in a conspicuous place, and they should only be allowed to buy cacao at such registered places ; in fact, they should be placed under the same restrictions as pawnbrokers. They should also be required to keep a book register, showing the amount they had bought, its quality, from what estate, and from whom, and be liable to inspection at any time.

Supposing you inspected the premises of a dealer, how would you go to work ?—I would see the amount of cacao in the shop ; have it all weighed and measured ; compare it with the book, and if he had more than the quantity represented in his book, I would prosecute him.

That ought to be an offence of itself ?—Yes.

Supposing all the cacao is accounted for in his book, you would be helpless ?—Yes.

Even if the entries were all false ?—I should make him put the name of the estate and where he got the cacao from. An estate under 20 acres would be registered, and if he had put down cacao received from an estate which was not registered, we should be able to get him there ; or, say, if he had 5 cwt. from a registered estate and the estate only produced 1 cwt. during the year, that is, supposing he got more from the estate than the estate was registered to produce during the year.

You would know that he was not speaking the truth then, and prosecute him ?—Yes.

Mr. Huxley : Suppose he named an estate which was not registered. I know one estate of over 300 acres which sold the whole of its produce to Moormen.

The Attorney-General : You would make the superintendent of an estate keep books too ?—Of course, he would have to keep a book of accounts. If he was not registered, I do not suppose we could compel him to keep a book.

The only way to do it would be to compel a man to record all sales ?—Yes.

Who would inspect all these books of dealers ?—The police sergeant. I should make him do it regularly, and have Inspectors and Superintendents dropping in at any time. I would make the sergeant go round every day in a place like Matale. In the villages the korala would do the inspection.

The Attorney-General : Rather a cumbrous system to register all these small gardens and small acreage and the amount of produce they are likely to yield ?—Yes, but they must have got it in the Kachcheri.

It would take a great deal of inspection to inspect the books of the dealers ?—I do not think there would be so many dealers if they knew that a list of their premises was kept and they had to keep books.

Supposing that you only had the dealers licensed and their premises, and forbade sales except on licensed premises, supposing you stopped there, do you think it would be useful ?—Yes.

I mean it would be simple enough, and it would not be any hardship to any one. I do not know whether it would be useful. I would not allow any hawkers or anybody to buy cacao except at registered places.

And always in the daytime ?—Between 6 A.M. and 6 P.M. It would put a stop to small thefts.

I do not know whether it would be effectual.—I think it would.

All dealers to be licensed, to have their names on their premises and not to buy except on those premises, and not to buy except in the daytime ; I do not know whether that would be effectual.—I think it would. It would certainly put a stop to a lot of stealing. A man knows perfectly well that it is hard to dispose of, and you get at the receiver.

The hawkers, of course, would be left. I suppose, if you found a man on the road with cacao, he would say he had bought it from a licensed dealer. I suppose he would explain it in that way.

And he might have done so. You might have tundus, some sort of pass, showing from whom he bought it, the date he bought it on, and the quantity he bought. Of course, that would involve a considerable amount of trouble.

Mr. Huxley : Just the same as the cattle passes.

Witness : The cattle passes put a stop to cattle stealing. Five years ago it was three times as much as it is now.

The Attorney-General : For very large amounts it would be unnecessary ?—Yes, it would be for the cooly going along the road with a small amount of cacao. It would make it legal for him to be stopped, and if he could not give a satisfactory explanation where he got it from, he could be detained until there was an inquiry.

The Attorney-General : In some of the laws with regard to vanilla the name of the consignee is also given. The grower when he sells has to deliver to the person who buys a certificate in the

form in the schedule, first showing the number of vanilla pods, shoots, or cuttings disposed of by him, and so on ; and then that has to be countersigned by the officer or constable in charge of the nearest police station.

Witness : I would not have any cacao transported by night.

How many estates in your district employed rural police : only one, I believe ?—In 1901-02 Pallakele and Wattegama.

If all estates employed rural police you could not find the constables ?—No, and it is an enormous cost. The amount paid by Government is enormous, which I do not think is realized. I have got the figures.

The Attorney-General : Is there not a rate ?

Mr. Huxley : The Government pay half.

Witness : I can give the figures for the police in Matale last year. Two groups of estates applied for rural police, one with a total acreage of 1,292½ acres, and the other group with 929 acres, altogether 2,221 acres. Nine constables were employed for four months. The cost to the Police Department of the rural police and for rent and quarters came to Rs. 780, both together. Half of that was paid by the estate, and Rs. 390 was all Government was supposed to pay. On paper it is only Rs. 390, but the money paid in batta to the police, in batta to the headmen, and awards to headmen brings the whole amount to Rs. 3,271·50, and only Rs. 390 is paid by the estate, and all the rest is paid by Government.* If Government have got to do that for every estate, Government will be bankrupt. This force of police always patrolling is working successfully. It is not a case of protecting cacao, but preventing the thefts, just as watchmen are employed at a store. They patrolled round the estate. At Pallakele, too, the cost was enormous. There were 3,000 acres, and in three months the cost of rural police was well over Rs. 1,000.

Mr. Huxley : That is exclusive of what the cost of watchmen comes to, which is Rs. 3,000 a year.

Witness : The cost in Matale is Rs. 817 a month to prevent cacao thefts on two groups of estates. In North Matale there are no constables out in that direction. Superintendents had always testified that the rural police stopped cacao thefts, but a poor estate could not afford them, and if they could, the Government could not afford to pay this sum.

Mr. Huxley: Does Mr. Lyall say it is successful?

Witness : Entirely. A good many estates last year thought of applying for rural police, and I had to ask them not to, as we could not possibly give them the constables. We got constables up from Colombo as it was, and Government were not able to pay for it. The fact that rural police prevented thefts on three or four estates does not affect the cacao question in the least.

The Attorney-General : The season is four months. When about ?

Witness : October to February.

The Attorney-General : Have you had any experience of the efficiency of the estate watchmen ?

Witness : I should say they were fairly efficient. They are well worked. I should think a lot depends on the superintendent of the estate.

The Attorney-General : How about the headmen ? Can you really say they have been doing their best to stop it ?

Witness : I do not think they did three years ago, but I think they do now.

The Attorney-General : And I suppose the headman, if he likes, can stop it ?

Witness : He can do everything.

Mr. Huxley : Have they rural police at Pallekele, for instance ?

Witness : Yes, I think so.

The Attorney-General : You would suggest that cacao should only be sold within the gravets of the town ?

Witness : If they could be properly supervised : places like Teldeniya, where there is a police station or resident headman, but not in the small bazaars.

Mr. Huxley : Not Dingalle or Katugastota.

The Attorney-General : You think the Government Agent ought to have a discretion to refuse a license to a man ?

Witness : Yes.

The Attorney-General : I do not know if the number of purchasers would be largely reduced. It would be rather hard on the small growers, would it not ?

Witness : They bring their vegetables into Kandy now, and I do not see why they should not bring their cacao. They sell their cacao in the bazaars on the road.

Mr. Huxley : I suppose they get a better price for it ?

Witness : They say they can get a market for their vegetables in Kandy, but not for their cacao.

The Attorney-General : There would be a certain amount of expense to take it to a distance, though not very serious.

Witness : Not so great a distance that a man could not get back in a day. It is simply like going to market.

The Attorney-General : Have you any other views to put before the Commission ?

Witness : No, except I do not see why a few estates should benefit by the rural police at an enormous expense to Government, and for other estates nothing to be done at all.

The Attorney-General : It cannot be applied all over ?

Witness : No, it is impossible. It is no remedy for the whole question. I would recommend having rural police if there have been serious robberies on an estate for some time, and it could be proved that they were big gang robberies of coolies and could be traced to any village quarters, then I would say, "Station police around the estate, and make that village pay for them in bad cases." Otherwise I should say the rural police system is impossible.

The Attorney-General : You cannot engage extra men for those four months ?

Witness : Not trustworthy men. And the amount of trouble they give to the rural police in those four months ! If there were more estates it could not be done. They have to be supervised. There were two constables at Wattegama in 1901 and 1902. They were said to do no good. I do not see how they could do any good—two constables put out there by themselves in plain clothes, with nobody looking after them. It is useless ; there should have been a sergeant and four men, and they should have been visited by a superior officer once or twice a week ; but you cannot do that all over the country.

Mr. E. B. Alexander, Assistant Government Agent of Matale, examined by the Attorney-General.

How long have you been at Matale ?—I have been there two years and a half.

Has stealing increased or decreased ?—Stealing during the past two years has decreased, no doubt.

And why do you think so ?—Because of the new system which we brought in.

New system of what ; please explain.—Well, in the first place I have made all the arachchies patrol in the neighbourhood of all the estates—

* For details see Appendix B.

arachchies and durayas—on fixed beats between 4 and 7 A.M. and 4 and 7 P.M.

And it is in the evening and early morning that most of the stealing is done?—Principally. The coolies are on the estate the rest of the day; at night thieves do not go on estates to steal, as they cannot see the pods, and they know that if found with green pods they would immediately get punished.

That is one step.—Another and one of the most important steps of all—directly you have got your headmen working properly—is that no one should be allowed to remove cacao without a pass from the headman.

Have you introduced that system?—Yes, that has been in force for two years.

How do you apply the system—to all amounts or to small amounts?—At present it is only applied to removals by small growers. But if the system were legalized, it would be necessary, in order to avoid class legislation, to provide that planters should have passes for their cacao, as well as the smaller native growers.

The Attorney-General: What happens now if a man does remove cacao without a pass?—He is immediately brought up before me.

And then?—I call upon the man to account for his possession. Probably he will tell me it came from such and such a garden. I order the Korala to go to that garden and see whether his statement is true. It is perfectly possible for every man to prove that he got the cacao quite honestly, because within a fortnight you can always show the marks of plucking on your trees, and every cacoa grower, native or European, can always state how many days previously the cacao was plucked.

Suppose he fails in all this, and you find that his explanation is not true, what happens then?—The cacao is handed over to the Police Magistrate, and I get it confiscated and sold.

Is the man charged?—The Magistrate calls upon the man, under section 420 of the Criminal Procedure Code, to show that he legally acquired it. If he cannot show that he legally acquired it, the property is confiscated under that section.

The man is charged, is he not?—No charge is made. The property is suspected to be stolen, and is brought before the Magistrate as such under section 419 of the Criminal Procedure Code. No charge is necessary under that section of the Criminal Procedure Code. If the man cannot show that he legally acquired it, it is confiscated and sold.

And the proceeds of the sale?—They are credited to Government. Everybody in the Matale District now knows that a tundu is required for the removal of cacao. But whenever cacao is seized in course of transit without a tundu, every opportunity is given to the person so removing it to prove that he has legally acquired it. If the cacao has not been plucked more than a fortnight, he can show the marks of recent plucking on his trees. Within one month the shells of the cacao pods could be produced. After a month he could prove his *bonâ fide* possession by the register kept by each headman. This register shows the extent of each garden in the division, the number of the trees, a reasonable estimate of the crop, and the issues of cacao for which a tundu has been given from time to time. The fact that there has been no complaint whatever shows that we have always treated the claimants with proper consideration.

That is the third step that you have mentioned: that arachchies should keep a register of these gardens.

Mr. Huxley: Is there not such a register in the Kachcheri now?

Witness: It is not a very reliable one; it was made up several years ago, and the number of these gardens has been constantly added to.

The Attorney-General: Are the arachchies to be trusted for work of this sort? It puts a good deal of power into their hands.—I take it they are to be, as there are no complaints. I should hear about them if there were, as I go constantly about the district.

You think the power has been honestly exercised?—I am perfectly certain it has.

Mr. Huxley: Are these men paid?—Yes it is only fair that these men should receive pay. The sum of Rs. 995 is what I have just paid for patrolling the district. This is in addition to what was paid for special rural police, the figures of which have been given by Mr. Dowbiggin.

The Attorney-General: For how many estates?—All the estates in Matale south.

Question: Have the police proved useful?—Yes, they are trained men, men trained in the habit of punctuality, who can be absolutely guaranteed to start out at 4 A.M. to patrol with the arachchi. I supervise pretty constantly myself, getting up at 4.30 A.M. to be there at 5 A.M. When we say 4 A.M. it means they have got to be at their posts at 5 A.M. It is not light until 5.15 A.M. I do not think you want very many police constables. I should like to see them scattered about the district, and a few sergeants with them, in order to supervise them when I cannot do it. The orders that I have given them are that they are not to go on the estate. I always post them between the villages and the estate at points where the thief must pass, and that is where I always find them. If I allowed them to go on the estate, I should not be certain where they were. I have them at fixed points where I can always call a man up by whistle, within three or four hundred yards.

Have you the tundus in foil and counterfoil?—Not yet. It is not legal. I have got a scheme of tundus in triplicate in my Administration Report, which I should like to make legal. There is only one thing I should withdraw in my Administration Report. (Witness referred to this system of passes in his Administration Report, extracts from which he read.) I withdraw the proposal for a pass at three days' sight. This is a matter which I go into very often with my headmen, because they are much better able to judge of the effect of my orders than I am, and they tell me that three days will not do; that it is too much; and that twenty-four hours would do in most cases. Personally, I would not have any time put down. I should leave it to the discretion of the headman, who always, of course, sees the man who wishes to get a tundu and can arrange with him. Of course, if this is made law, I can see each foil, and see that the headman is not allowing too long a time. It is fairer to the grower or person who is going to remove cacao that the time should be left to the discretion of the headman after consultation with the grower.

Is there not a limit for removal to cattle passes now?—Yes, you have to take the animal away within a certain time from a village. There is a certain time put down, I think.

Mr. Huxley: Could you not make him remove cacao within a certain time too?—I would leave the actual time to the discretion of the headman who issued the tundu.

Mr. Huxley: The presumption would be that he would not want a pass until he removes the cacao?—No.

Mr. Huxley: Would not such a pass lead to abuse, inasmuch as the Moorman would see it and say to himself, "This pass expires in half an hour," knowing that the man must sell in such a time? The men are all astute enough for that.—

Of course they are, but the headman is a sympathetic man as a rule.

Mr. Huxley: Not the headmen?—He would not try to harass these people. He would give plenty of time to the grower to go there and make his bargain. He would make a liberal allowance.

The Attorney-General: Are you in favour of the proposal that all dealers should be licensed, and sales should only be on the licensed premises and in the daytime?—I think it would be of some use, but not sufficient use merely to license the cacao traders and to make them keep accounts. It would not be sufficient.

Not even if you say sales shall only be on the licensed premises and in the daytime?—It would not do sufficient good. It would be good in this way; it would eliminate the hawking, but it would not go far enough. You want a check on these traders. A license would not be a sufficient check. You would not be able to know whether the trader had legally acquired his cacao, and the only way to find out whether he has legally acquired it is to find out where he has got it from and whether he has got the headman's tundu for it or not. Some of them are growers, and you can find out whether they have legally acquired their cacao by finding out whether the gardens, as entered in the arachchi's register, could produce that amount of cacao.

The Attorney-General: That is a very elaborate system, is it not?—I do not believe in elaborating the system too much. If you elaborate the system enormously, you would have to have a yearly assessment and appoint assessors and map out the district into various blocks; you would have to have in one area two or three assessors, say, a planter, a native proprietor, and korala. Every year you would have to make this same assessment. It is feasible to some extent, but cumbersome. I think it is better to leave it to the arachchi to make this register and keep up this register.

Mr. Huxley: Do you think it would be a good thing to stop the sale of cacao outside the gravets?—A very bad thing. I do not think you have a right to stop enterprise. It is a restriction to legitimate enterprise and trade to tell people that they cannot sell outside a particular radius. If a man is an honest man he has a perfect right to trade where his house and boutique are. Of course, if he is an objectionable man and there is anything against him, and it is proved to the satisfaction of the Assistant Government Agent, who ought to know something about his history, you would refuse to give him a license.

Replying to Mr. Huxley, witness said: You must have a license, but must not confine them to the town.

Mr. Huxley: You are not entirely in favour of licenses?—Certainly I am, and having sales on licensed premises. Every single person, native and European, thinks that it is absolutely necessary.

The Attorney-General: And sales only in the daytime?—Of course, that too, and that is reasonable. The only thing is this—we must try and get some check on the cacao that is in the trader's hand. I know the difficulties, because the question of registration was discussed on the old Commission.

The Attorney-General: Was not the former Commission strongly against this on the ground that it was too elaborate, and that it would lead to abuse?—Yes, but I think there must be some way out of it. I think that a man—a trader—should be forced to explain his possession of cacao, but not by a simple law making every one explain his possession of cacao. I think that would be unfair. We ought to be able to find out between us some way in which the trader might follow some method of explanation. If he did not explain, I would have him fined. I would not sentence him to imprisonment, as mistakes are likely to occur. If he is a grower as well as a trader, we might register his gardens. We should then know how much cacao he can grow, and have a check upon him. The trader must also file headmen's tundus for all cacao received by him. We should then have a check upon the cacao received by him, as well as upon the cacao grown by him. The whole thing will fail if he does not file these tundus.

The Attorney-General: Of course, there would only be a limited number of dealers who are also growers?—Well, nearly every dealer is also a lessee of cacao gardens and owner too. But then, of course, to register their gardens would be very little trouble. I am perfectly certain that it is feasible and that it is necessary.

The Attorney-General: Before the old Commission suggested that all lands cultivated with either cacao or coffee might be registered and changes of ownership annually notified, and it was suggested that a somewhat elaborate printed form should be used. This, it was thought, would involve hardship on the peasantry.

Witness: It would be useless to send these people a printed form to state what their acreage was; you would never get the return back, for most of these people are absolutely illiterate. You would have to have the district blocked out and regular assessors appointed, who would have to make the assessments; that would mean you would have to pay for it.

The Attorney-General: That would be a costly matter, would it not?—Not an extremely costly matter.

Mr. Huxley: It would cost several thousands of rupees?

Witness: No, why should it? You could get assessors for Rs. 30 each.

Mr. Huxley: A day?—No, I was speaking to Major Pain, and he says he would assess for nothing.

Mr. Huxley: What, the whole district?—No, you could block it out into districts of 7 miles.

The Attorney-General: The proposal is only to assess the gardens of the dealers.—I say they must be assessed, whatever other assessment is made. You must assess and you must register them. I think it would be perfectly possible to assess everybody without very great expenditure. Take four districts with three assessors at a cost of Rs. 90 each district.

Mr. Huxley: You would not get that done in a day.—Of course not.

Mr. Huxley: You would not get it done for Rs. 50 a day.—That is a visiting agent's charge.

The Attorney-General: How many dealers do you propose to license?—I would say, at least twenty-five people in Matale in the town, and I think in Ukuwela three, and in three other places three, two, and ten.

The Attorney-General: Assuming that a man is licensed and his garden is assessed—suppose you go and inspect the premises, you would weigh all the cacao that he had and examine his tundu?

Witness: He would have to file his tundus. He would have to account for his sales.—We should have to have all that in his book, showing the balance as well as the receipts and issues. He must keep it in a regular form; all would have to do the same thing, otherwise it would be a bother for me or the police to inspect.

Would they be able to keep accounts?—Oh yes, every single man can; of that I am perfectly certain.

Mr. Huxley: They keep accounts very well themselves?

Witness: They did not keep accounts or at least show them to me at first. Now they do

show me their accounts and keep arachchies' passes. But it is not done in proper form. They are not legally obliged to show their accounts, but do show them just to show that they are honest men more or less, and this has done a very great deal of good in the last year. Certainly people have told me, *i.e.*, natives, who know, that these traders are much more careful of the people from whom they buy than they were before. If a man comes to them, they now usually say, "Where is your pass?"

The Attorney-General: Now we are at almost the old system condemned in the former Commission, viz., the registration of all the gardens.—Registration would certainly be open to question, and people would send in petitions.

You would have tundus, and I suppose in the form of account he would say; "Received from A. B. so and so?"—a column form of tundus, and then he would put down under "garden accounts," and what his own garden did?—I think that would be very feasible.

Mr. Huxley: Something like the Mauritius form.

The Attorney-General: The form gives the number, year, month, day, the name and surname of the grower of the vanilla, who the owner of the estate is, the number of shoots of vanilla, the number of feet, the number of bunches of the vanilla pods, the weight of the bunches, the number of green pods, the weight, where it is to be conveyed—apparently a sort of pass.

Witness: Another thing I should like to state is, you must have headmen as the people to issue the passes. Do not allow the grower to issue the pass. I also think it would be necessary to have a clerk—a special clerk—for this work, which would amount to a good deal. There would be an enormous number of foils and counterfoils coming in.

The Attorney-General: If you have tundus, then the dealer has to keep books.—He would keep a book, and his garden would be registered. There would be three copies of each pass. One would be sent to the Kachcheri, one the grower himself would keep, and one would accompany the cacao. I could at any time send a sergeant with my file of tundus to see if the dealer had correctly entered the amounts shown in the tundus in his accounts.

The Attorney-General: Is the stealing sufficiently bad to require an elaborate system of this sort, do you think?—I say that stealing is not bad, but you never know where it might break out, and prevention is better than cure. In Matale there were only two places where any quantity was stolen last year. On Ratwatta Mr. Bell told me that a lot of cacao had gone, amounting to 1,000 pods. I immediately set out, and after three or four days' hunt I found the whole of it.

Anybody convicted for it?—No, it was found in a garden, and we could get nobody convicted. The other occurred on Mr. Martin's estate at Yatawatta.

No conviction either in that or in Mr. Martin's?—Yes, on Mr. Martin's estate the accused were convicted. They came from the Kurunegala District. My headmen detected them in the act of stealing.

Have you any other suggestion?—I should like to put in my Administration Reports for 1901-1902, withdrawing the three days' date for tundus. I do not think we ought to have a law making everybody account for their possession of cacao, but a law showing by what means every single innocent man can prove his *bonâ fide* possession of cacao, and if he does not follow these simple methods of explanation, then he is guilty of encouraging theft. We would not say he is a thief, but he will be liable to a fine.

I am perfectly certain that we can find methods of checking the grower, but how are we going to check the person found in possession of cacao?—Give the Magistrate some power by which he could punish these people. Could we not, for instance, make it absolutely necessary for the man to show that the produce came from his garden, or that he had a tundu for it?—Supposing I went into a village anywhere, and there had been a great quantity of timber stolen from some neighbouring forest, some distance away perhaps. I go into a compound and find timber stacked up. I should say, "Where did you get this from?" The owner would have to show me where he got it from, or produce the pass for it.

The Attorney-General: Would not this system be hard on the small owners?

Witness: I do not think it would be hard on the small owners if you only show these people by legislation how they can prove their innocence, and then make them explain after that. If a man cannot explain by his tundu or from his garden that he has a rightful claim to the cacao, then he ought to be convicted and fined.

Mr. Huxley: Do you think the stealing is bad?

Witness: I do not think stealing is actually bad.

Mr. Huxley: Simply because you have taken these very expensive measures to protect the produce.

Witness: You may have a gang go to an estate, and it is very difficult to convict them. There has always been stealing, and there is always danger of a serious theft occurring. That is my view of it, and that is the view, as far as I have ascertained, of planters in the Matale District, European and native. Everybody admits that last year there was very little stealing, and that if matters were as last year everything would be all right.

Mr. Huxley: The present state of affairs has been attained by considerable expenditure of money and activity on your part.—In my opinion it will always be necessary to maintain the patrol by the arachchies, and to pay them for it.

Mr. Huxley: How do you account for stealing being more in some places and less in others? Is it not a question of high caste and low caste? Is it not your experience that the durayas are the worst lot?—No, I think there is very little stealing amongst the Sinhalese. The Moors are the only people who steal regularly. Of course, there are thieves in every community. Moormen come across from over the border. I wrote to the Government Agent, and he kindly put on a patrol between us and them. Moormen are the worst lot, because most of the trade in cacao is done by Moormen.

Mr. Huxley: Do you think it would be sufficient to introduce passes and make passes legal, and do away with registers?

Witness: You must get hold of the trader. The great thing is the pass to a great extent, but I think you ought to license the trader.

Mr. Huxley: Would you do away with the distinction between ripe and unripe cacao?

Witness: No, I would not do that. I think it would lead to a lot of false cases. I do not think you could distinguish cured and uncured. Where are you going to make the distinction? Natives have different ways of curing from Europeans, and most of the Europeans have different ways amongst themselves, and there are different stages in which cacao is cured.

Mr. Huxley: Supposing a man has stolen ripe pods, you cannot touch him?

Witness: If you found him removing under this tundu system you could.

Mr. Huxley: Under the present law?

Witness: All I could do would be to have him up and get the cacao taken away from him.

Mr. Huxley: If you found him in possession of unripe cacao, you would run him in at once?—Yes.

Witness: If you have that, a simple law of requiring an explanation for ripe as well as unripe cacao, how is the trader going to prove that he got his cacao fairly? He would have to call one hundred and one people from whom he bought it.

Mr. Huxley: You misunderstand me. I said nothing about ripe cacao; I said cured cacao.

Witness: Well, I do not believe in that distinction between cured and ripe cacao.

Mr. Huxley: I do not see that.

Witness: Ripe cacao pods?

Mr. Huxley: Have pods if you like. If he has stolen the cacao very carefully, he would get ripe pods.

Witness: Of course, they all do.

Mr. Huxley: You cannot touch him then, but if he is found with green unripe pods, you can touch him. The Ordinance distinctly mentions unripe cacao.

Witness: Personally, I think it would be very dangerous to put ripe cacao on the same footing as unripe.

Mr. Huxley: The offence is just the same.

Witness: I do not say it is. The mere possession of green pods is a presumption of guilt.

The Attorney-General: Have you any views in regard to fencing estates to protect them?

Witness: I think everybody ought to have a clear boundary. Just to show you the difficulties of protection—the same on every estate—I should like you to go over some of the estates. Nobody ought to plant within four yards of a boundary, and a man certainly ought not to plant cacao within that space. The spread of the tree is more than that.

Mr. Huxley: the spread of the tree may be 24 feet.

Witness: That is eight yards. He ought not to plant within four yards, otherwise his tree would go over his boundary.

Mr. Alexander read remarks on this subject from his Administration Report for 1902.

Mr. Huxley: You think fencing would be a good thing?

Witness: Yes, I think a fence ought to be planted gradually. They ought to fence where two estates join.

The Attorney-General: Thieves would get over a wire fence.

Witness: Yes, they would get over a wire fence, but it would stop the average man and lessen the temptation to steal.

The Attorney-General: I do not think there is anything else.

Witness: Yes, coolies employed on estates should be made to account for all cacao in their possession, both ripe and unripe.

Third Sitting: held at the Victoria Commemoration Buildings, Kandy, on June 13, 1903.

Present:—The Hon. Mr. A. G. Lascelles, K.C., Attorney-General (in the Chair), Mr. A. C. Kingsford, Mr. T. C. Huxley, Mr. Peter de Saram, and Mr. Eric Watson (Secretary).

Mr. Frederick Bowes, Police Magistrate of Kandy, examined by the Attorney-General.

How long have you been the Magistrate at Kandy?—Since 24th December, 1902.

You have had rather a short experience?—Yes.

Have you had any experience of cacao stealing in the cacao district?—I have had a considerable number of cases in the last few months.

It would be hard for you to say whether cacao thefts are on the increase or not?—I cannot say. I have not looked up the figures.

Could you supply us with a statement of the charges, say, for the last five years in the Kandy Court?

Witness: Yes.

The Attorney-General: And showing the proportion of convictions to acquittals, say, for the last five years? Who are the persons who have been charged as a rule? Have they been coolies or villagers?—Villagers. All the cases I have had have been cases from Katugastota estate, and they have been villagers from the villages surrounding and included in that estate—a low caste of villagers chiefly.

Have they been large thefts or thefts in small quantities chiefly?—Thefts in small quantities as a rule; I have only had one which was at all a considerable one.

And have you been able to convict in a fair proportion of cases?—In most.

Have these men as a rule been detected by the estate watchers?—Invariably.

Have you had any receivers charged in your period?—No; but I have had two men carrying cacao seeds charged who had committed no legal offence.

Ripe seeds or unripe seeds?—Ripe seeds.

Have you had any charges under the Prædial Products Ordinance for either loitering or lurking about a plantation or having unripe cacao?—No.

Or buying and receiving from an estate labourer?—No.

Have you been able to form any opinion as to the efficiency of the watchmen who are employed on estates?—The Katugastota watchman, from what I have seen of him, strikes me as being very efficient.

Have you had any experience of other estates?—I have had no experience.

And have you had any experience of the system of the rural police?—No.

These estates, I suppose, as a rule are unfenced?—Most of Katugastota is unfenced, but a series of plots through which village paths go are fenced.

I suppose it would be almost impossible to fence it so as to be of any service?—I should think so in an estate of that description.

Do you think that the law should be altered in any way? Have you any suggestion as to any alteration in the law?—No, really I have not considered nor looked into the matter deeply enough.

Well, have you any other remarks on the subject that you are able to make?—No, except there is that case I referred to. There were two men found by night carrying two bags of seeds. They had committed no offence, of course, but I felt morally certain they were guilty, and if you could get at that stamp of man, it would do good. They were boutique-keepers who had been collecting from estate coolies or petty receivers or people of that sort. The people whom they said had sold to them absolutely denied any knowledge of such people.

The Attorney-General ; There is no evidence of theft at all.—No offence and no evidence of theft. One said, "I bought it from the villagers and other people down at a certain village." It is true they will not do it now on account of the headmen.

Mr. de Saram : Were the cacao pods intact ? No, cacao seed.

Mr. Huxley : That could be dealt with by leaving out the word "unripe" and by penalizing between sunrise and sunset, removal without a permit.

The Attorney-General : That is rather a strong order, not to allow a man to remove his own property without a permit.

The Attorney-General : Who as a rule are the receivers ? Are you able to say from experience ?—No, I can only say from hearsay. The people who are convicted of theft are occasionally receivers ; there is always that possibility.

Do you think it would be a useful thing if the places of all purchasers were licensed and sales at night time forbidden ? There has been a suggestion that it would be useful that the purchaser would have to be licensed as a dealer, have his name up above his shop, and only be allowed to buy in the daytime.—Yes, I think that will put a stop to receiving by small owners.

Mr. Gordon Pyper called and examined by the Attorney-General.

What is the name of the estate you are in charge of ?—Hantane. I have got two or three, but I live on Hantane. The others are Roseneath and Bolagalla. I am also Managing Director for Ratwatta.

Are these estates in the neighbourhood of Kandy ?—Yes.

Are there any small holdings in the neighbourhood where cacao is grown ?—I speak from my own particular case where I live. The other estates I leave to their superintendents to look after their own interests. As for mine, there are one or two about.

Small gardens adjoining the estate ?—Yes.

Is your estate intersected with roads ?—Yes, my own estate is.

Have you had any experience of the thefts of cacao on your own estate ?—Yes.

Have the thefts been frequent ?—This last year I have had no thefts, but the year before I had one rather big theft, and on that occasion I sent down to Kandy to the Government Agent. I wrote a letter, and he sent up Mr. Dowbiggin. Mr. Dowbiggin came up and went all over the place. I showed him where the cacao had been stolen. He sent for the arachchi, and the headmen at night came up and they went round the estate and down these short cuts leading to these native holdings and inspected the native gardens, but could find no traces of the thefts there. The arachchi and other headmen continued to come up about once a week and went round, and this seemed to have frightened them, so that last year I had no bother. I think their coming up was most effectual.

Quite so. Three years ago were you troubled with thefts ?—Yes, just in the same way, with petty thefts going on. My people on going round their work frequently came upon heaps of pods in the field and in the jungle.

I suppose it is hard to estimate the proportion of cacao that is stolen ?—It is almost impossible.

You then attribute the improvement to the activity of the headmen ?—Certainly.

They have been spurred up to do their duty ?—Certainly.

Mr. Huxley : It more or less depends upon the zeal of the Government Agent ?—Yes. I think it was just that which accounted for these improvements.

Mr. Peter de Saram : The big theft you spoke of—to what extent was that ?—I should say between 500 and 600 pods. The pods had been broken off in three different places.

The Attorney-General : About how much cacao does that mean ?—About half a hundredweight.

And the value ?—About Rs. 25.

Who do you think the thieves as a rule are ? Are they coolies, villagers, or travelling men ?—It is very difficult to say, but I should say they would very likely be some of the villagers, people who have gardens round about, some of my neighbours.

Do you know at all how they dispose of the cacao ?—No.

I suppose you have some idea ?—Oh! yes. It is quite a common thing along the road to see Moormen sitting on the roadside with scales and buying cacao from natives in small quantities.

These travelling Moormen are a sort of pedlars ? —Yes.

Mr. de Saram : You say you see them on the roadside ?—Yes, on the roadside ; they buy arecanuts and other produce, put them in a sack and squat over it, and I have seen them weighing up cacao.

The Atorney-General : And they take these things into the town and sell them ?—Yes, in larger quantities.

How do you sell the cacao off your own estates ? —I ship it off to London from Kandy.

In large quantities ?—Never less than a ton.

You never sell any locally, not even if any is damaged ?—No, none.

How much is the acreage of your own estate—I forgot to ask you that ?—Four hundred acres tea, 150 acres cacao.

Have you any watchmen ?—Yes.

How many ?—Three generally during the crop season.

And are they efficient, do you think ?—Well, I doubt it. I just take the best I can get.

Mr. de Saram : Are they Sinhalese ?—No, all Tamils.

The Attorney-General : And are they the best of your coolies ?—Yes.

Mr. de Saram : You have never tried Sinhalese watchmen ?—No.

None available ?—We have native Sinhalese.

On the principle of set a thief to catch a thief, do you not think they might be a help ?—They might be. I always believe that what we know is better than what we do not know !

The Attorney-General : Have the headmen as a rule helped you ?—On application they did worry about a good deal.

But formerly you found them very slack ?—Yes, but still I must say when I sent down for the korala he came up. He came up twice. On one occasion a boy came and reported having seen a man picking cacao. I said, "Are you sure ? Why do you come and tell me ?" He said he was up a tree gathering jak fruit when he saw this man taking cacao. I said, "Will you come and show me the place ?" He said, "Oh yes, I will show you the place," and he came and showed me the place, and I could not find any signs of any cacao theft. I said, "I do not see anything." He said it was quite true what he had told me. I said,

"Will you go and tell the headman?" He said "Yes," and I gave him a note to the headman to the effect that the bearer would tell him of a theft he saw committed, and that I would like the headman to make inquiries. He came up, went all over the land with this Sinhalese boy, and could see no signs whatever, and he brought the boy up to the bungalow and told me. I said, "I will leave you to say what should be done with the boy for doing so. He came here and told you this story." The headman took a case against this boy for giving an official false information, and got him put in prison for three months.

Mr. de Saram: Was he one of your men?—No, a stranger, a village boy. I suppose he had some grudge against this other man. However, we never found that out.

The Attorney-General: Is your estate fenced in any way?—No.

Would not fencing protect you?—No. A man could creep through an ordinary fence.

Have you had the rural police on your estate?—No.

And you cannot give any opinion as to that?—No.

Any of the other estates that you surpervise?—On Ratwatta they had the village police, who came and settled in the locality. When Mr. Burmester was there he seemed to think at the time it did good, but that is only hearsay, what he told me. On one estate a policeman goes round once or twice a month, and the superintendent signs a paper just to show that he has been there.

Have you had cases in court of cacao thefts during the last three years?—No.

Do you advise any alteration in the law, or do you think if the existing law was enforced more actively it would be sufficient?—I think if we could get the officials to do as they did last year, we could not have anything better. They took every care and every trouble, and I am quite satisfied with it if that could be repeated when crop is on,

It is about four months that you would have this extra diligence?—Yes.

There is one thing further. If these small traders could be licensed in some way and not allowed to buy under certain quantities, much the same way as they did at Portsmouth, where ships were being refitted—all the tradesmen there are licensed, and none of them are allowed to buy lead or copper such as comes from the ships in any less quantity than a hundredweight. I thought at the time when I read that that perhaps something like that in the neighbourhood of cacao estates would work.

How about the small grower—it would rather interfere with him?—I do not think it would interfere with the honest man at all. He could easily get the headman to certify.

I take it that he would have to pay for that?—Very likely.

Would a system of that sort work?—I do not think that a native would have less than a hundredweight.

True, of course, it is hard to say the average amount that a tree bears?—Yes.

The gardens of the natives as a rule, I take it, are the smallest of the gardens, with a score of trees or even less?—Generally more round about Matale way.

Mr. Huxley: What do you think of the proposal that he should only remove his produce between sunset and sunrise?—Yes, that might do some good.

The Attorney-General: That would be a perfectly harmless suggestion?—It could not hurt anybody, and might do good.

Having licensed dealers would also not be objectionable?—Yes, it would not do any harm.

I think the point of your evidence is that what is wanted is the more active enforcement of the law?—That is it. The past year's experience is quite satisfactory to me. The arachchi and korala came up and went down to these people, and this put them all on their guard, and last crop I had no thefts.

Mr. Huxley: In fact, as long as we have an active Government Agent you think we are all right?—I think so; if things are done as last year we could not do better.

The Attorney-General: I do not know whether they could have some sort of rules?—We cannot place any reliance upon our watchmen. We pick the best men that we can. Having done so and getting such poor results, one cannot state anything than that it shows more under very strict Government supervision. Of course, if a theft takes place on an estate, and you, for instance, write and tell the Colombo agents, the first thing they would ask would be, "Had you watchmen?" And if you said "No," they would next ask you why. On the other hand, you put watchmen on, and if there is a theft and they think they are likely to be blamed, they cover up that theft.

Mr. Cecil Harry Trigg Wilkinson, examined by the Attorney-General.

What estate are you in charge of?—Kondesalle, belonging to the Anglo-Ceylon General Estate Co.

Is it near Kandy?—Five miles from Kandy.

What acreage?—Under cacao close on 600 acres.

Is the estate surrounded by small holdings at all?—Pallekele has a large river frontage, but this estate Kondesalle has none, but is two miles from the river, and is surrounded with small holdings.

There are footpaths intersecting it?—Yes. In fact, the main entrance to the estate is across the river over a ferry.

What is your experience of thefts for the last five years?—A lot of petty thefts took place. I do not think anything is taken all in a lump or very large amounts at the time, but one month I detected eighteen thefts.

Did you catch anybody on that occasion?—We got one man two years the other day.

Mr. Huxley: In this one month when you had eighteen thefts?—No, this was about two months ago in connection with this season's spring crop. In these eighteen thefts we were not able to detect any one or bring him to account.

The Attorney-General: Can you form any estimate of the average amount that you lose from thefts?—I could not say. My estimate of what possibly I may have lost by pilfering is 1 per cent., that is about 200 or 300 bushels.

The Attorney-General: And have these thefts, since 1895 say, been on the increase or decrease?—On the increase when prices are high; when prices are low not so much.

Prices are low now, are they not?—Fairly.

And thefts very much lower too?—Yes.

Who would you say are the thieves as a rule? Are they villagers?—Villagers, but I think the pilfering is done by our coolies, a little at a time, you know.

And how do you think the stolen cacao is disposed of?—No doubt there are receivers all round, not only Moormen, but native proprietors too.

How do you sell cacao off your own estate locally?—On Kondesalle it is all supposed to be despatched home, but black cacao is sold, and when sold the man gets a pass showing how much

is sold to him, and that is kept in a duplicate book. No cacao is sold without a pass from me.

And the black cacao is the spoilt cacao?—Yes.

Have you any watchmen on your estate?—Yes. I employed about eight or ten. I have got a list, I have ten now. These are the different people (producing list) and why they were dismissed. I had fourteen last year. I have now taken on three more, and here are the reasons why the others were dismissed, and so forth.

What is your experience of their efficiency?—Good, bad, and indifferent.

And the good, how are they?—Perhaps I should have said fair, bad, and indifferent. I have no opinion of them at all. I believe the more watchmen we have the more cacao we lose. We have to employ these watchmen for the proprietor's sake and for our own sake. It shows that we are doing our best.

And these watchmen, are they recruited from your own coolies?—No, from Malays and Sinhalese.

Is your estate fenced in any way?—On Pallekele there are three estates around me, and the remaining part is bordered by the river. I have aloes 4 or 5 feet high, but they cut their way through these.

A man, if he wants to get through, can easily cut his way through?—He can cut the leaf either side; it can be easily done with a penknife.

Fencing is not much good?—It may be in some measure a preventive. If he gets seen and has to make a rush for it, he may not be able to make for the particular opening he got through, and might be cornered that way.

Have you had the system of rural police enforced on your estate?—No, Sir.

You have had no experience of that system?—None.

Have you had any charges in the Police Court?—I can give you one or two good ones. A man I ran in the other day. He had had one month, three years, six months, and just lately two years.

Has he appealed against that? If not he is secure.—He is secure just for the present, for the time being. Men like that have no fear of jail at all.

Not a Kandyan?—No.

What did he get three years for?—Intimidation and using a gun, and two years last month. He resisted the arachchi.

Mr. de Saram: Has he not been placed under police supervision?—I do not know.

The Attorney-General: He ought to be, really. Four convictions during the last three years.

Mr. de Saram: Possibly the convictions were not brought to the notice of the Judge.

Witness: This occurred in a 19-acre field, where one would think we could detect thefts there. After some time we offered a reward to find it out.

The Attorney-General: Have you any figures as to the proportion of convictions to acquittals in your case?—No, I am afraid I have not worked them out. There were eighteen cases taken to court, and in three I got convictions.

How long back do these eighteen cases go?—During the last five years.

Mr. Kingsford: How is it you were unsuccessful? Planters have said that when they took cases they were generally successful.—I took my cases at Panwila, and sometimes I was not able to go myself. If I sent my conductor or kangany or watchman, the case always got dismissed; if I went myself, I generally got a conviction. On one occasion I numbered the pods myself. I put different numbers on them. They were stolen, the man was arrested, and I got a conviction. Another time my boy numbered the pods, and the Magistrate said Mr. Wilkinson could not swear to the identity of the pods when the numbering had been made by the boy, and he put it down to slackness on my part. This was at the Panwila court. I had to go 8 miles there and 8 miles back. For one case alone I had to travel 96 miles.

Mr. de Saram: Owing to many postponements?—Yes, owing to postponements.

Why were these allowed?—We would go up, say, on a Friday. The Magistrate had no time.

It was a summary case?—It would not take a year to be disposed of, but he did not do it. Sometimes the accused applied for an adjournment.

The Attorney-General: Have you ever charged any one with loitering or lurking about the plantation?—No.

Or buying or receiving cacao from an estate labourer?—No.

Do you know it is illegal to loiter?—I know it is illegal. If they come on to the estate after nightfall, they have to carry a lantern.

The law does not say that?—No, but I insist upon it.

The Attorney-General: Well, have you any opinion to offer as to whether the law ought to be amended, or whether it would be enough to show a little more energy in enforcing the present law?—My opinion is that a good deal of the trouble is due to the fact that the headmen get no remuneration for the work they do. In my opinion, if the headmen were paid something, and if they did not work properly and were dismissed, they would feel it.

The Attorney-General: Have you any suggestion?—I think receivers should keep books and show where they get the cacao from. The size of their own gardens would often supply a test. No matter if I sell him a hundredweight, let him show a receipt.

Supposing that you have that, and you go to the store of a buyer and you ask him to account for his stuff. He shows you his book that he bought the whole amount from native growers?—He has got to mention those growers' names and show a receipt from them.

And supposing he does that, supposing he shows a receipt for all of it, it is easy to obtain a receipt in this country?—It is in this country, it is true.

I do not know whether it would be efficacious?—The Government should appoint a man on a good salary on purpose to go round and look at the books. I do not say he could do it for every district.

If the books had been tampered with and unfairly kept, it would be extremely hard to bring it home?—I think where there is a will there is a way.

Mr. Kingsford: The date of receipt and the date of despatch should be given. He should also show what the garden is capable of producing.

The Attorney-General: And the gardens would have to be all registered and the estimated produce of each garden?—Yes.

Every now and then you would have to revise the register; it is a big business?—I think there is a list now in the Kachcheri.

It is informal that. Do you think it would be a good thing if we compelled every dealer in a village to have a license?—If licensed, he would have to keep books at the same time.

I do not see how books would lead to a conviction.—The merchants ought to find out where these men get the cacao from. It might be stolen from their own estates; they do not know who brings them the cacao.

Mr. Kingsford: They would all have to get licensed as receivers?—I suppose so.

Or make it for the Central Province only?—You want it for the merchants in Colombo too.

The Attorney-General: Would it be sufficient to make a limited quantity, to say who bought under a certain amount? I do not suppose that the stolen stuff is sold in large consignments.

Mr. de Saram: No, only in small quantities.

Mr. Wilkinson: Every little helps.

The Attorney-General: It would be a hard thing to convict a man of receiving stolen goods because his books are not in order; it will help to put fright into them if a few of these cases were taken.

Mr. Huxley: If you make the law too stringent, you run a danger of injuring the small grower and making it impossible for him to dispose of his produce.

Mr. Kingsford: They are very clever in keeping books.

Mr. Wilkinson: It would be very easy for an honest man to keep books. An honest man would keep them all right. It is the dishonest ones who would not.

The Attorney-General: Do you not think if the present law was more stringently enforced it would be sufficient, and if the arachchies were stirred up to do their duty?—By all means, if they can be stirred up.

The Attorney-General: I think in some parts it is admitted they have been successfully stirred up.

Mr. Wilkinson: I believe so.

The Attorney-General: But apparently not in your neighbourhood?—No.

Mr. Kingsford: Did Mr. Alexander pay these headmen?

Mr. Huxley: Yes, very heavily for the extra work they did.

The Attorney-General: How does the price of cacao compare now with what it was at the time of the last Commission?

Mr. Wilkinson: The price now is Rs. 45·50.

Mr. Huxley: Do you think doing away with the definition between ripe and unripe cacao would be any advantage?—Certainly, I think it would be. I would leave the word only "cacao."

Mr. Huxley: If you met a man carrying a bag of ripe cacao, unless he could give a satisfactory explanation where he got it from, you would have him prosecuted?—Yes.

Mr. Huxley: At present he can only be prosecuted for having unripe cacao?—Yes, unripe.

Mr. Kingsford: How about cured cacao?—The word "cacao" would meet everything.

Mr. George James Murray, in charge of Pallekele Group, 6 miles out of Kandy, including Ambacotta, Rajawella, and Waraketiya, was next examined.

How much is the acreage of your estate?—3,100 acres; it is a group of four or five estates.

Are there any small holdings near these estates?—Not many, Sir; they are mostly surrounded by heavy jungle. I have here a rough plan. (Witness produced and explained plan, and added that for fifteen years he was assistant before he was made manager.)

Mr. Huxley: Did you lose on Victoria?—I did not lose very much.

The Atorney-General: On the whole, have you had much cacao stolen in the last three years?—I cannot say I have. Fourteen cases. I only take them from memory; one or two at least are rather important.

These are the cases you have discovered of cacao being stolen?—Yes.

The Attorney-General: Of course, I do not mean of cases in court.

Mr. Huxley: Those are court cases you have in that list?—Most of them are.

The Attorney-General: What I want is generally if you think much has been stolen?—I do not think so. I think it is very hard to detect. The proper professional thief does not leave much of a trace, and if he wants to go on carrying on his trade he would not throw the husk where a man would be likely to see it. The chief evidence is either the finding of the husk or the discovery of the tree from which the husk has been removed and without disturbing anybody. The watchers go along the same path, and it is very hard indeed to detect it.

The Attorney-General: As far as you know, during the last three years there have not been very many?—No.

It is impossible to state anything like the percentage of the crop which has been stolen?—Yes, Sir, practically impossible.

Well, have thefts since the date of the last inquiry, since 1895, been on the increase or decrease?—They were very bad about three years ago. I do not think that during the last three years there have been so many. I have employed the rural police.

Mr. Huxley: You have only had one case?—Yes, in this crop which is just finishing. I have not been told of any more. There again a watchman comes and tells one of a theft on his own beat. It rather goes against him. I would say a watchman would not be so likely to tell you. If he can catch the man or pretend that he had a struggle or had a shot at the man, he would tell you, but an ordinary theft in which he could not himself get any *kudos* and only be blamed for allowing, I do not think he would report it.

The Attorney-General: Is there any particular reason for the decrease in the thefts, assuming that there has been a decrease?—I think the action of the Government Agent in stirring up the headmen in the last eighteen months.

The Attorney-General: Has done good?—Certainly has raised a fair hue and cry, and the village headmen were out on patrol too.

Who do you think the thieves are? Are they coolies?—I have caught some of my own coolies, but I think they are mostly villagers.

And have you any information as to how the stolen cacao is disposed of?—Moormen buy it; they are the chief traders. In the middle of the Pallekele group there is a village; the places are thick with villages, and you can see cacao always on the roadside being sold to Moormen; and I think they hold mortgages over the Sinhalese gardens.

The Attorney-General: And are paid off in produce?—They are quite ready to lend the small native owner a little money. In some villages you cannot buy fowls, eggs, and straw. You ask why, and are told they are all promised to Moormen. They seem to have a big hold on the villagers.

Where do you dispose of your cacao?—It is all sent down to Colombo.

Have you any watchmen on your estate?—I have spent Rs. 3,000 on watchmen during the year; it is not so much on the acreage. I employ as many as thirty watchmen during the heavy crop season.

Are they efficient?—I get Sinhalese and Tamil working together, Sinhalese more or less. I know and I think that answers fairly well. I do not think they can in reason be expected to catch many over so large an acreage. I do not

offer a reward, but if a man is repeatedly reported sleeping in the lines, I put him on another division to see if he would do better, or else turn him off the work. I do not think it is reasonable to expect them to arrest every thief who comes on to the estate.

On the whole, you would be disposed to say they have done fairly well?—As far as I can expect, but they deteriorate dreadfully. If you take on a Malay watchman, in course of time he finds his way to the nearest village, and is always there of an evening. I do not know whether they make him stay. They invite him there and give him a drink,—it is a usual thing for watchmen to be always wanting to go to the village,—and he makes friends of the villagers, more so even than the rest of the coolies.

Are these estates fenced?—Yes, in one or two parts opposite where the natives dwell, with sapan fencing, a very thorny tree like African logwood. Being so thorny, the tree is difficult to cut down, but with aloes, they are very soft to cut, and a thief could get through a fence very well, except, of course, if he was in a great hurry.

Fencing on the whole is not very suitable?—No.

And how long have you had this system of rural police?—I have tried it twice. I have not tried it this year, but last year and the year before I tried it. There were thefts during the time the rural police were on the estate.

Have you found it successful on the whole?—I think the idea of having rural police and the effect of it did some good, but the system of making the different headmen go on patrol with the police did most good, because if a theft was committed on a certain beat where the headman was on patrol, that night he was bound to make it rather warm for villagers when he got back, and tell them they were not to do it, for I think the headmen really can tell who are the thieves.

What is your actual experience of the rural police on your estate?—I think they did good. As far as I am concerned, I think they created some alarm in the villages with the headmen alongside, but as far as catching a thief, I would prefer my own watchmen. I never found a headman catch a thief, but of course there were only five or six police to my twenty-five or thirty watchmen. I think also that they make one's watchmen to be alert during the time they are there. Your own watchmen are not so likely to be up to tricks.

How many charges have you had in court during the last three years?—I think I have got fourteen that I can remember, Sir.

And what is the proportion of acquittals to convictions?—I very seldom took a case to court unless I thought I could get a conviction. I cannot remember them all, but there was one man acquitted on the ground of insufficient identification. Then there was a gang robbery, which proved to be a serious thing. There was a lot of cacao in the store, and it was removed—we said quite a ton. The day after the cacao was removed we came across a spot beautifully safeguarded with a ventilating partition half broken. We knocked this out, but found no cacao. We then broke into the next room and found twelve bushels of rice; that must have been a big haul. On another occasion in a narrow path a watchman saw some men who had come down by the river. They came on, a whole lot of Sinhalese; he stood back in the narrow path facing them with his gun. My brother was in charge at the time, and he came across a lot of caves which looked inhabited at the time, but no cacao was found. The rural police was sent down, but could not find anybody.

[The witness referred to other cases.]

The Attorney-General: All those were acquittals?—Yes.

Mr. Huxley: How many convictions have you got there?—An estate cooly was caught removing cacao and was convicted and got six months' rigorous imprisonment. In another case they said they found the pods in a ravine, but I could not say it was a theft. I caught another cooly at daybreak, and he said he was removing squirrel beans under a tree. He was convicted. All these cases have been with watchmen and rural police.

The Attorney-General: If we have the totals of cases of conviction, it will do—how many convictions and how many acquittals?—I have got three convictions, not counting the case where the man died.

Mr. de Saram: Have you got the number of cases instituted?

Witness: Only one man for insufficient identification.

Mr. Kingsford: Are you robbed by your coolies much?—I have heard of several petty cases. I have caught them, and they have pleaded guilty. If they had not pleaded guilty, I do not see how I would have got any punishment against them.

The headmen were made to patrol with the rural police. Has that had a good effect?—I think so, undoubtedly; I have not had the rural police this year, but I think I shall have. I think it time, otherwise they will have nearly forgotten the effect of it.

Mr. Huxley: Do you remember what it cost?—I got them for six months and they cost me Rs. 205. I paid the arachchi 50 cents a night every night for patrol.

Mr. Huxley: You had to build quarters for them?—Yes, I think half of the fines went to them, but I really cannot tell; the professional thieves leave no traces.

The Commission then adjourned.

Fourth Sitting: held at the Victoria Commemoration Buildings, Kandy, on June 20, 1903.

Present:—The Hon. Mr. A. G. Lascelles, K.C., Attorney-General (in the Chair), the Hon. Mr. S. Haughton, Mr. T. C. Huxley, Mr. Peter de Saram, and Mr. Eric Watson (Secretary).

Mudali Hami Arachchi, examined by the Attorney-General.

Witness (whose evidence was interpreted) said he was the arachchi in charge of the Wariapolla division, which was 16 miles from Kandy.

The Attorney-General: Has he any cacao in his division?—Yes.

A good deal?—Yes.

Are there large estates there or are they small gardens?—Large estates belonging to European planters.

Well, is there much stealing do you think?—Last year in my division it was much less.

Before that?—Before that there was some stealing, but it was not so much last year.

And how long have you been in charge of your division?—I was appointed in 1894.

Why has it decreased? Why was there less last year than before?—There was some difficulty in the way of thieves last year because cacao garden owners were asked to obtain certain tundus and permits.

The tundu came from the headmen?—Yes, from the headmen, from us.

I suppose a man was not allowed to remove cacao unless he obtained a tundu from the headman?—Yes.

Explain the system, how you worked, and the tundu.—We have received orders from the Assistant Agent to be patrolling about the neighbourhood from 4 A.M. until 7 A.M., also from 4 P.M. to 7 P.M.

And the headmen had received these orders, too?—Yes.

Explain how it worked.—When I reached the end of my division the headman of the adjoining division should meet me there. Then we talked together and said we should be patrolling in this way. If we have cause for any suspicion or doubt, then we make a little further inquiry at any spot.

Mr. Peter de Saram: How does he find out anything suspicious?—If a man passes the same spot about the same time and tries not to let us see him, then we have suspicions. Then we make further inquiries. We have received orders to assess the cacao gardens previously, and if people are removing the crop, we give a permit for removing a proportionate quantity. We also order villagers that they should not remove such cacao without a tundu.

And if they do so, what then?—They do not do it without tundus.

And you think that system was successful in stopping the thefts?—Yes.

Who were the thieves do you think? Were they the coolies on the estates or the villagers?—In a theft of that nature there must be a little help from the watcher or from one of the coolies.

Mr. de Saram: The coolies working on the estate, not by the villagers?—It is the villagers for whom it is done, but they do it with the help and connivance of the watchmen.

The Attorney-General: Have these estates watchmen? Do they employ any watchmen?—Yes.

Who are the watchmen? Are they from the coolies or specially employed?—From outside people who bring good characters from gentlemen from other places.

Mr. de Saram: Are they Sinhalese or Tamils?—Sinhalese, Tamils, and Moors are all taken.

The Attorney-General: Are the watchmen any good do you think?—From some watchers they get help.

And from others?—Supposing there are eight watchers on an estate, only one or two people would be inclined to help the thieves.

And the rest of them, do they do their duty? Do they try and stop the thefts do you think?—Yes.

Well, who takes the stolen cacao?—There are small traders who buy it.

Are they men who have shops, boutiques, or are they travelling?—There are some people who carry their scales and buy on the road. Some people take it to boutiques also.

Mr. de Saram: Moorish or Sinhalese?—Both.

Are they low-country Sinhalese?—The greater number of them are low-country Sinhalese.

The Attorney-General: Are they people who have settled here or are travelling about?—They are people who go about trading, not settled.

Have you had the rural police in your district?—Yes.

And are they any good, do you think, to stop thefts?—They are very good; they help us very much.

Do you, as a headman, work together with the police?—Yes.

Mr. de Saram: No friction whatever?—No, there was no lack of confidence; we always trusted one another.

The Attorney-General: Last year had you any complaint of thefts from planters?—One complaint was received. We made the inquiry, but it was difficult to find out whether it was done by the coolies or by outsiders.

All last year in your division you only had one complaint of cacao stealing?—Yes, I think it was only one; I think I am not mistaken.

Mr. de Saram: What was the name of the estate?—Wariapolla.

The Attorney-General: About how much acreage of cacao is there in your division?—About 1,500 acres altogether.

And of that, how much would you say belongs to European estates and how much to native gardens?—Out of that about 200 acres are village gardens.

And the theft that you had a complaint of, was it a big theft?—Yes, it was a theft of between thirty and forty pods.

Mr. de Saram: Would you consider that a large theft?—No, I cannot think it was a big theft.

Other thefts? — In previous years they took place, but not this year.

The Attorney-General: You have told us in the last year. How were things in the previous years?—In former years I seized the thieves and got them put in jail.

Had you many cases of thefts in former years?—More than this last year.

And had you cases of large thefts before last year?—There were complaints of that nature.

And there were thefts no doubt? — In my division there were no more than one or two thefts in a year.

Mr. Huxley: What estates were they? — Wariapolla, the Grove, Ratwatta, and Mr. Bell's estate.

The Attorney-General: Had you complaints of large thefts in previous years?—About the same kind of thefts. There was no case of more than 100 pods at any time.

The Attorney-General: I suppose there are a certain number of thefts that are not reported at all, are there not?—I do not know.

Well, I suppose, if the watchman, for example, steals it himself, it is not reported properly?—If the planter comes to know of it he complains.

But he will not learn of it, will he?—No.

Witness: All cases of theft which came to his knowledge, whatever the value might be, were reported to the court.

The Attorney-General: Have you had any cases in court during this past year?—No.

You have not had any complaint at all this last year, I understand?—In 1902 there was one case in court. I do not quite remember whether it was in 1902 or 1903, but there was only one.

And had you a conviction in that case?—No.

Had you not sufficient evidence, or how did it break down?—The charge was that a trader had bought the cacao. The complaint was that the cacao was taken by the cooly and sold to a trader, but there was not sufficient evidence, and the man was acquitted.

Have you had any other cases in court?—No.

Has he got any ideas of any new law which would be useful in stopping these thefts?—Last year's system was very good.

Mr. de Saram: Worked very satisfactorily?—Yes.

The Attorney-General: He means the system of patrols, police, and tundus?—Yes.

Mr. de Saram: If that is vigorously carried out, there will be no theft?—I think they will be stopped.

The Attorney-General: Does he think it would be a good thing if all dealers had to be licensed and only allowed to buy cacao at a shop with their name over it?—Yes, that would be a very good thing.

Mr. de Saram: What would be the advantage?—People are afraid to take cacao to any distance, and this would prevent them selling to anybody just near about. If they held a license to buy, people with stolen cacao would have to go to large towns.

Mr. Gilbert James of Katugastota estate was next examined.

The Attorney-General: Generally, are these thefts on the increase or decrease now?—I should think they were on the increase.

Until when?—I could not say, but the price of cacao materially affects the thefts a great deal, if they can find a ready market.

The price is down?—Is down now, but last season it went up, and there was a ready market for cacao, and traders were continually coming to me and asking me if I would sell them my inferior cacao, which I refused to do.

Have you had the police on your estate?—No, about three or four years ago they were tried when Mr. Martin was there, but I remembered him saying they were no good.

Have you any watchmen on your estate?—I had twenty-four during the crop and have only twelve now. Practically there is no cacao to steal, and I have reduced the number.

Who are your watchmen, Tamil coolies?—Tamil chiefly, some of them are Malays and some Sinhalese.

And have you found them efficient?—Yes, last year I think they worked better than they had done previously. I work them under a head watchman, going down constantly myself to see that they were looking after their work. They certainly want to be looked after very closely, I think, to keep them at their work.

Are thefts on your estate bad just now?—Not just now; last year they thieved at every opportunity.

I suppose it would be hard to give any estimate of what is taken?—We estimated last year about seventy robberies.

Is it possible to estimate the amount approximately?—I do not think it was much. They consisted of small robberies. I took thirty-one cases to court, and the biggest haul was 100 pods.

And how did you get on with the cases in court?—I won twenty and lost eleven.

I suppose, on the whole, that is not a bad average?—It is pretty good, I think.

You got two-thirds of them. Have you any views as to the steps which ought to be taken to deal with the mischief?—It is very difficult to say how you are to deal with it. My experience of coolies and villagers out at Katugastota is that they do not seem to mind going to prison in the least. We have had some men convicted three or four times. I would make imprisonment more severe.

Mr. Huxley: The Sinhalese at Katugastota are a very low caste lot?—Yes, they are about the lowest caste, I suppose.

The Attorney-General: Do you think any alteration in the law is required, or that the present system, if worked energetically, would do?—I think if the receivers were made to account for their cacao, it would be a good thing. It would be a difficult matter to spot it in every case I should think; it might check it if the headmen had orders to look over books and make it compulsory for a man to produce vouchers for the cacao that he had got.

To oblige every buyer to accept some sort of voucher every time he received cacao?—Yes, and we could pretty well tell whether that man owns cacao or not. Now they buy anywhere. The trader keeps no books, no receipts, no accounts of his transactions in cacao.

Of course, the objection to that which has been raised is that it puts the dealer and perhaps also the grower—the small man—at the mercy of the headmen so much. He might be able to exact sums from him for permits and everything of that sort.—Yes, it is a very difficult question. A man who has got the opportunity will steal, and it is very difficult to stop it.

Mr. Huxley: In those cases of conviction were any lashes given?—No, none.

A man was convicted two or three times?—Yes.

Witness: The man was sentenced on the third occasion to six months.

Mr. de Saram: Were the previous convictions proved in court by any identifying officer, do you know?—No.

That is unfortunate; that means when it goes to the District Court the District Judge knows nothing unless in the lower court the previous convictions are proved. In eleven cases you failed for want of evidence?—For want of sufficient evidence.

Were any of the accused arrested?—They were arrested in every case and taken to court.

At the start?—Yes, in one or two cases the Magistrate did not believe my watchmen, and he threw the case out on that account, because in these robberies they often have two or three in it, and one man is watching somewhere about and he lets them know if any one is coming. The watchman sees them running away, dropping a pod or two which they have been cutting. I have had several cases like that.

The Attorney-General: It turns on a question of identity, I suppose?—Yes, a question of identity, and they get away.

Would it be any good to compel all buyers to take out a license and only to sell at places specially licensed?—It would not prevent them buying on the quiet, and it would not prevent the trader going into the village to buy other things buying cacao quietly.

Mr. Huxley: Do the headmen patrol Katugastota?—No.

That is not in the Matate District?—No.

The Attorney-General: Have you received any assistance from the headmen?—None at all. I have received no assistance from any one, except what my watchmen have done.

Have you complained to the Government Agent about it?—No, I have not complained about it, but they have sent several petitions to the Government Agent about my watchmen. Of course, I have once or twice called in the headman to come and inspect the places from where a man has been seen running away, and he has seen places where cacao has been freshly cut and pods and shells left about, and given evidence in court in one or two cases.

Mr. de Saram: They have not refused assistance to you at any time?—No, they have not refused, but they have not acted independently as they should.

Mr. Huxley: Do you think it would be a good thing to do away with the distinction between ripe and unripe cacao?—My experience out there is that natives always pick cacao that is unripe. If allowed to ripen or remain on the trees too long, they feel they are sure to lose it, and Moormen traders buy unripe cacao and colour it, and it looks all right.

Mr. de Saram: Do European planters sell cacao to natives?—Oh! yes, a lot do; they sell black cacao to natives. They can dispose of it better than we can. There is a market in Colombo for it, but the native traders give a better price than they will in Colombo for it, and they sell it for that reason. I do not sell any to the traders at all.

Not even black cacao?—No, I have stopped it all.

Mr. Huxley: I suppose you experience no difficulty in getting your cases tried?—Only when the Magistrate has been away and another one is taking his place for two or three days. Then cases are postponed, as the man says he wants to call witnesses. Postponements are not a good thing.

Mr. de Saram: He should be called upon to give the names of his witnesses at the time of arrest, and if he fails to do so it should be brought to the notice of the Magistrate.—If he gets back to his village again, he gets a postponement and concocts evidence with the people.

Oman Kandapulle was next examined.

The Attorney-General: Have you a cacao estate, and have you had it some time?—Yes, 250 acres; I have possessed it for more than twenty-five years.

One land, or do you mean different gardens?—Adjoining Pallekele estate I have 100 acres and 150 acres at Kadawatta, near Teldeniya totum.

The Attorney-General: Have you many thefts of cacao from your estate?—Two or three times a year.

Are they small or big thefts?—Three and four hundred pods. On one occasion several people came at night; two or three people came and took away two or three hundred pods. Each man takes two or three hundred in one night.

[The Commissioners were of opinion that witness had misunderstood the question, as the number seemed greatly in excess of what was probable, but he adhered to his statement.]

Are these thefts better or worse than they were formerly? Are there more or fewer thefts?—Always about the same. On two or three occasions thieves come.

At harvest or crop time there are two or three thefts?—Yes.

Mr. Huxley: How many watchmen has he?—Two.

Who buys the stolen cacao down there?—The small traders of the village, who have small estates. It is to them generally the stolen cacao is sold.

The Attorney-General: And who steals it?—Sinhalese villagers.

Coolies and Moormen ever?—Mostly Sinhalese villagers.

Have you caught any of them?—The year before last I caught two thieves, took a case against them; they were convicted and got three months.

Did the headmen help you and patrol on your estate?—There are two headmen, the arachchi and korala. The arachchi is a villager; he is no help to us. He only on occasions when we catch thieves and take them before him takes steps for bringing the case into court.

And he does not help you a great deal?—No.

Mr. de Saram: What other help does he expect?—The headman himself is a Sinhalese man, and if the thief is a Sinhalese villager the arachchi does not help us, except when the thieves are caught and brought before him.

Have you had the police on the estate?—Nobody.

Mr. Huxley: Did not the police when they were on Pallekele go round his garden too last year?—Yes, there were police, but they did not go over my estate. I did not ask for police, and they did not come there.

The Attorney-General: If you had asked for them, the police would have helped you a little?—We have not asked.

The Attorney-General: How many cases have you had within the last three years?—The year before last I caught a thief and had a case, and last year this other case was taken, that is two.

Mr. Huxley: What were they stealing on Kandawatte, there is no cacao?—There is cacao of a hundred acres.

Mr. de Saram: Then he has had only two cases and in both of them he succeeded?—They were sentenced to be imprisoned.

The Attorney-General: How do you think the thefts ought to be stopped?—The headman must be given particular instructions to check it.

C. Vitelingam Pulle, living in the village of Gingalle, right in the middle of Pallekele estate, was next examined.

How many acres have you under cacao?—About 150 acres barely.

Is it all together?—Yes, the 150 acres, and there is some jungle.

Have you had much stealing on your estate?—Two or three times a year.

Every year they steal two or three times? Do they take much at a time?—Five, six, or ten people come and gather fruit, cut the pods, and take the seeds inside.

How much do they take at a time on one of these raids?—Once I had about 2 or 3 cwt. stolen.

How long ago was that?—This year only once.

How much was stolen this year?—According to my estimate, about 1 or 1½ cwt.

And the year before?—I had three or four thefts when 3 or 4 cwt. were stolen.

Who do you think the thieves are?—Sinhalese villagers.

Have you any watchmen on your estate?—I have two.

And are they any good do you think?—On the estate of 100 acres I have one watchman there and another on the estate of 150 acres.

And do they work well ?—They do.

Do they ever catch anybody ?—No.

Have you ever had any cases in court ?—I caught no thieves, and no cases were taken by me.

Do your watchmen ever see the thieves ?—Neither see them nor arrest them.

Does the arachchi ever help you ?—What help can the arachchi be to us ? If we catch a thief and go to him, he will do the needful. They are all kinsmen.

Did the police ever come to your estate ?—Yes, on three or four occasions, when the police were quartered on Pallekele, on account of Mr. Murray.

Did they do any good when they came ?—Some good, because on seeing a set of black-coated men the villagers have some fear.

Mr. Huxley: Where do the Moormen get rid of the cacao ? You say you are on the side of the Gingalle village ?—The Moorman carries a bag and also a pair of scales and goes about. Often a woman would collect some fruit, dry it with fire, and sell it to the Moorman.

Those are coolies ?—In the gardens round the houses there may be a few cacao trees and from those also they collect. This they manufacture and sell to these people. If we ask where the outer cover or husk of the fruit is they will say that the cattle have eaten it.

The Attorney-General: And how do you think the Government ought to stop these thieves ?—An order must be made that these pedlars or small traders should not go with bag and scales into the villages. In that case people who have cacao to sell would necessarily be required to bring their cacao for sale on to the roadside. A permit should also be given.

And obtain the permit from whom, the headman ?—If the traders are not allowed to go into the villages, Moormen with bags and scales, those people who have cacao would be obliged to take their cacao for sale out of the roadside to boutique-keepers.

The Attorney-General: I do not see any advantage in that. The very fact that Moormen go about with bags and scales tempts these men to steal and sell ?—People going round in search of cacao thieves have the chance of disposing of stolen property.

Mr. Huxley: He spoke of women who took cacao, put it in chatties, and put them on the fire.

The Attorney-General: Ought the Government to do anything more, do you think ?—Usually I take cacao to Colombo, where it is sold for Rs. 42 a hundredweight, but these people who collect cacao by theft mix up bad cacao with good cacao, and sell at a low rate to these pedlars; thereby the local price is lowered to Rs. 33 or Rs. 34 for mixed cacao.

Ought the Government to order the arachchies to patrol on these estates do you think ?—It would be a good thing if such an officer would go round, but how do we know that he does watch ?

But suppose the Government appointed an officer and made him patrol, it would be a good thing ?—It would be good otherwise to make an order not to sell green or wet cacao and take out a permit. Traders should be asked to have a permit book, giving the name of the person from whom they had bought cacao and keep a register of sales.

Do you think it would be a good thing if no one was allowed to sell cacao unless he had a permit, what is called a tundu ?—The trader must also be provided with a book, and whenever he has any cacao in his possession and he is asked where he bought that cacao he must be prepared to say from whom and what place he bought it.

Supposing the book was untrue, what would you do then ?—Now if you give my name would I speak a lie ?

Supposing he put down the name of liars—I suppose there are some in his district ?—What shall I do; there are good and bad persons.

The trader might, when he was buying stolen cacao, enter it from some man who had a garden or from a man from whom he had bought a small amount. He might enter that he had bought a larger amount in that way.—The seller should always endorse the book. If that is not good, both parties or either of them must take out a permit from the arachchi.

Supposing a man with a small garden wanted to sell his cacao and went to the arachchi and asked for a permit, he would have to pay the arachchi something?—That is the case everywhere with officers.

How much would he have to pay the arachchi ?—He looks upon the position of the man. From us he would not demand anything, but from poor people he would exact something.

That is the objection to the tundu system ?—Yes, Sir.

Does he think it would be possible to avoid the tundu system ?—All this time there has been no tundu. If I wanted to sell 10 cwt. I weigh it, give it over, and get the money.

He told us that the seller ought to sign the book in the dealer's shop at the time he sold.—Yes, if a trader buys 10 cwt., he makes an entry in the book and I must sign it.

Mr. de Saram: There are many who cannot sign ?—Then a witness should be brought to witness the entry in the book, or the man's mark witnessed by somebody else.

The Attorney-General: The difficulty would come in with people who cannot write.

Mr. de Saram: And these small holders are generally people who cannot write.

Witness: That can be managed by getting a Sinhalese or Tamil man who knows how to write to witness the transaction.

Mr. de Saram: The seller would have to pay him for that ?—When a person knows that things go on in this way and that he must not sell without signing the dealer's book, a man in great need would give 5 or 6 cents to have his cacao sold.

The Attorney-General: Supposing a law was passed that no one should be allowed to buy any cacao unless he had a license, and only buy at a certain shop where the dealer had his name up as a licensed shop, as the arrack shops are.—That would also be open to fraud, for persons would take out a license whose object would be to buy stolen cacao.

The man who was licensed would have to buy at his shop; he would not be allowed to buy on the roadside with a scale and bag; he would only be allowed to buy on licensed premises.—Then in that case the estate owner would bring cacao, and the thieves would not; it would be a good thing. The thieves generally take and give over the stolen cacao to only those persons who have small estates. With the small cacao quantity they have, they would prepare and sell. How can we prevent it ? The only thing that can be done is to proclaim by beat of tom-tom that pedlars should not go and buy cacao.

Has he any other suggestions to make ?—The only thing is that the cacao should always be entered in a book, and that pedlars should not be allowed to go and buy cacao, while owners of small estates should not be allowed to sell out of proportion to the quantity that they are able to produce.

The Commission then adjourned.

Fifth Sitting: held at the Kachcheri, Matale, on July 4, 1903.

Present:—The Hon. Mr. A. G. Lascelles, K.C., Attorney-General (in the Chair), the Hon. Mr. S. Haughton, and Mr. Peter de Saram.

Mr. William Dunuwille, Police Magistrate of Matale, examined by the Attorney-General.

The Attorney-General: How long have you been Magistrate here?—At Matale, Sir, since 1899.

And you have seen a good deal of the cacao stealing?—Yes.

Have you formed any opinion as to whether the stealing has increased or not?—The last two years it has decreased to a great extent, especially last year.

And to what do you attribute that?—To the vigilance of the rural and regular police—to the special police stationed at different estates.

Has that been effective?—Very effective last year; it was not effective the first year it was established. The reasons for that were the Superintendent of Police thought that the police were in charge of the Assistant Government Agent, and the Assistant Government Agent thought they were in charge of the Superintendent of Police, and there was no one to look after them. They had their own way, and regarded as only their business to bring up parties arrested to court. They did not patrol or do anything like that, but last year the Assistant Government Agent took a lot of trouble and made them do their work, and hence the decrease of cacao stealing. On one estate where there used to be a good deal of thieving I was informed by the superintendent last year that there was hardly any stealing. This was on Kapitigalla, partly in the Matale District and partly in the Panwila district. He attributed it to the excellent watchers he had employed. He told me a week ago that he had not had a single theft. The rural police were not stationed on that estate.

He has relied on his own watchmen?—Yes, and some of them were Afghans.

Have the headmen been active?—Yes.

In the last year?—Yes.

Do you know anything of the cost of rural police?—No.

It has been considerable?—I do not think I can express an opinion on that.

Has the difference in the price of cacao made any difference do you think?—Last year we had very good prices; I own a cacao estate myself.

Here in the Matale District?—Not in the Matale District, but in the Dumbara district, almost adjoining Matale.

What is your experience on your own estate?—I have no thefts, Sir.

Who do you think the thieves are—what class?—In the majority of cases that come before me I have reason to suspect that the watchers connive with the thieves.

What would the thieves be themselves? I suppose they might be anybody?—Generally watchers. I have had cases where the watchers were themselves charged with theft. A good many of these watchers are dismissed police constables, and in one or two cases I had *ex*-convicts, men employed on a particular estate who had been convicted of cacao stealing before and had been brought up again from the same estate. My opinion is that the present law to get at the thief is quite sufficient, but not to get at the receivers.

Have you any figures to show the decrease of complaints that have been made to you—to show how many there were this year and last year? Do you know whether it has been considerably decreased?—Some estates which brought a lot of cases to court last year have had hardly any this year where the police were placed. I will give you the full particulars at 10 o'clock if you will give me time. I have got statements made of each estate.

As to the receivers, it is your opinion that something ought to be done to get at the receivers?—I should like traders to be registered and books kept. They should be prevented from buying uncured and undried cacao seeds. I will give my reasons. A theft is committed last night. They shell the pods, and this morning they go and sell the seed only to the traders. If the latter are prevented from buying undried and uncured cacao, the owner will have a chance of tracing the thieves, as they would have to keep the seeds a day or two before taking them to the trader.

And the law that you advocate ought also to provide that the cacao should only be bought at the premises?—Yes, at the premises.

And you would have his name up?—I would have his name up, his premises registered, and require him to send a copy of the list of his purchases, giving the name of the owner of the cacao, the quantity and price to the nearest Police Court. That will prevent concocting false evidence in the event of there being a case afterwards.

Have a return made, say, every month?—I would suggest every week.

That he should send in a weekly return to the Magistrate or to the nearest police station?—Yes.

How long could cacao be called undried after it had been picked or stolen?—I should say three days.

Do you think it would be possible to draw the line between dried and undried cacao, because the idea seems to me to be a good one?—I speak as to what the ordinary villager does. He gathers his cacao to-day, and this evening he shells them. He opens them to-morrow, he washes them, and if there is a good bright sun the very same day he could sell them.

Supposing the shop of a buyer is searched, it would be rather hard to say that any cacao is undried; that he had no business to have bought it; and that he is guilty of an offence. It would even be hard to say whether the cacao was dried or undried?—We could see. The pulp would be on the beans or seeds; it would show. I have had cases brought before me with the pulp shelled last night, and this morning the thief had disposed of it.

Could you suggest any definition of the term "undried cacao" for the purpose?—Undried, say, within twenty-four hours of its being shelled.

But supposing you wanted a definition that would enable you to say that any cacao that you found was either dried or undried; supposing a man is charged before you as a Magistrate for having bought undried cacao, how would you be able to say whether that particular cacao was dried or undried; it might be partly dry or undry?—It would be mixed up as the ripe and unripe produce of cacao.

There are all stages of dryness?—There are; it is difficult to try and draw a line.

Mr. Haughton: Does it change its colour?—To some extent it changes its colour. I would say that no trader should be allowed to purchase wet seed which has not been exposed to the sun and dried.

The Attorney-General: Have you ever heard of the proposal that has been made that no one is

to buy unless there is a tundu for the cacao—that is one suggestion made to us?—I have heard of it from the late Government Agent, and I do not approve of it, Sir. Last year it has shown good results in this district, but after a few years they might abuse their powers. It puts a great power in the hands of headmen.

Mr. de Saram: The tundu, in what way?—I am a cacao grower, you are the headman; I come to you and ask you for a tundu to sell. You have got to certify me as a *bonâ fide* owner of the cacao. You give a pass to the purchaser that he has bought so much cacao. The man may have stolen the cacao. I would not approve of that system. It would be in the power of a headman to abuse it, and this headman may be an arachchi under a superior officer.

The Attorney-General: Supposing a dealer has an estate of his own, of course he would have to enter in his books all the produce of his own estate, but he might have some undried cacao in his store, and he would at once say, "Oh! it came from my own estate, that?"—Yes, to a certain extent.

He would have to enter in his book?—The quantity purchased.

And everything he brought into the store from his own estate?—Yes.

Mr. de Saram: He would receive as much stolen cacao and say it came from his own estate.

The Attorney-General: I do not know whether it would be a hardship to say no license should be granted to any man who has an estate of his own?

Mr. Haughton: How is he otherwise to dispose of his lawful property; he could not dispose of it?

Witness: I would prevent hawkers going about the estates buying cacao of villagers, but I do not know how it is going to be done. During the four years I have been here I have only had one case where a receiver was punished. He appealed, the case went up three times, but ultimately he was punished.

The Attorney-General: Have you also heard of the scheme to have the gardens all registered, obliging the buyer to register all purchases, so that it would show in his books who he had got every consignment from, and thus you would be able to refer to the register of the growers to see if it was possible to supply that amount—that is the scheme which has been suggested?—Yes, Sir.

Is that one which in your opinion would work?—It is the first time that I have heard of it, and I am not prepared to express an opinion.

Of course, you would have to estimate the produce of each garden?—Some may yield a poor return, and some may yield a very large return.

Have you any figures as to the proportion of the convictions and acquittals in cases that have been brought before you?—I have got a return from the year 1898.

And the result is what?—In 1898 there were 28 institutions, the number of persons charged 42, the number of acquittals 29, the number of convictions, 13; in 1899 there were 44 institutions, 54 persons charged, 31 acquitted, 22 convicted, and 1 absconded; in 1900 there were 62 cases, 26 acquittals, 43 convictions, and 1 absconded; in 1901 there were 64 institutions, 87 charged, 34 acquittals, 49 convicted, 2 absconded; in 1902 there were 40 cases, 12 acquittals, 24 convictions, and 3 absconded. Those who absconded were arrested this year, with the exception of one; and for want of evidence they were discharged. Up to the 30th June this year there have been 18 cases instituted, 26 persons charged, 14 acquittals, and 12 convicted.

And all those were charges of theft?—Of stealing cacao, Sir.

Have you ever had any charges for loitering or lurking in a place?—I have had two in the Matale District and three in the Panwila District.

Or buying cacao from an estate labourer—have you had any one charged?—Yes, I have had cases in the Matale District.

Have you any other suggestions about the question to make?—Except about the receivers. I think the present law is quite sufficient to get at the thief.

Have you any opinion as to the efficiency of the watchmen employed? As a rule are they efficient?—I think not, Sir.

A number of them are not any better than the thieves, I suppose?—Last year on Major Pain's estates some Mahommedans were brought over from India, and, as I said before, on Mr. Holloway's estate some Afghans were employed. If men of that stamp are employed, I do not think they can be easily bought over by the villager.

Mr. de Saram: Rather expensive though.

Mr. Dunuwille: On Major Pain's estate there were hardly any thefts last year. He has 300 acres in the Dumbara district.

Mr. de Saram: Are they natives of the country or Tamils?—Sinhalese villagers. A good many of them are dismissed constables, and in some cases pensioners from the police force.

Mr. Haughton: Just one question about undried cacao. We want to get a definition of dried and undried cacao, so that a Magistrate and the public generally should understand what the definition is. Although you are not able to describe it exactly, any one can tell wet from dried cacao. "Wet" is a distinct description, any one can tell that?—No one can say whether it has been dried in the sun or not. When I mentioned the word "cured" I meant European plantations. No ordinary villager would cure his cacao, but wash the cacao, put it out in the sun, and sell it.

Mr. Martin: Mr. Dunuwille, you said thefts fell off in 1901, but that return shows an increase?—I meant 1902. I told the Attorney-General the number of cases instituted just after the police were appointed.

It is not correct to say that thefts decreased in 1901: as a matter of fact, they increased?—Increased from the previous year you mean?

I was talking of 1901?—There is a difference of two cases. What I wanted the Commission to understand was that as soon as the rural police was established there was a lull of thefts.

What proportion of the district was under the rural police system?—I could not tell you.

Do you know the acreage under cacao? Do you know that it is 10,000 acres?—I could not tell you.

Do you know that the rural police only applied to 1,500 of these acres?—I know they were supplied on two estates. What I intended to convey was that few cases came from estates where the rural police were employed.

You do not know what Mr. Holloway paid his Afghan watchers?—If I remember right, Rs. 20 a head.

I can tell you: Rs. 24, and gave them clothes and found them lines and houses.

The Attorney-General: No doubt it is very expensive.

Mr. Martin: You are very fortunate in getting good prices for your cacao; I had 400 cwt. at the beginning of 1902, and was not able to sell it. You stated that the watchers are not very reliable, but you stated in a report that they are suborned to steal by the receiver in the ground adjoining the bazaars?—My remarks were based on the majority of the cases that came before me.

I quote that from the Administration Report for the Central Province for 1901. On what estates are discreditable watchmen employed?—On Mr. Paul's estate, Weharitagama.

He left the district early last year. I am not defending the watchmen, who are both intimidated and bribed, and unless we go to very great expense and loss, as I and Mr. Holloway have gone to, we cannot protect ourselves better. You cannot recall any other estate where "discreditable watchmen were employed?"—Mi-oya and Wariapolla. I found there dismissed constables employed as watchmen.

Wariapolla was under the rural police system for two years.

Mr. Dunuwille: What I mentioned was that a watchman came and gave evidence, and I found he was a dismissed constable. This was the year before the rural police was established.

Mr. Martin: But this estate on which this dishonest watchman was was under the rural police system?—Not at that time in 1901.

Mr. Haughton: When you talk of *ex*-convicts, what offence do you mean he had been guilty of?—He had been convicted of the theft of cacao from that very estate.

Mr. Martin: Mr. Dunuwille, you think the present law is sufficient to get at the thief? You convicted one man because he confessed, and the other man who was with him got off because there was no law to punish him. I am referring to case No. 16,450. Four men were brought up; they were detected with my cacao on their heads. You gave me the cacao, but said you could not punish the men.

The Attorney-General: It is not law so much as it is evidence. You may have a moral certainty that it is stolen, but there may not be any real legal evidence to convict a man of it.

Mr. Martin: In that case you cannot convict a man whom you meet with your stolen cacao carrying it on his head?

The Attorney-General: You assume that it was stolen, but you have to prove it.

Mr. Martin: That is exactly the point. If you refer to the way the Prædial Products Ordinance was altered for the benefit of cacao growers, you will find that the onus is all the other way. It mentions there any part of the produce of the cinchona tree. It was altered to protect cinchona growers. The onus is on him to account for possession.

Mr. de Saram (to witness): Have you had any cases reported to you where the accused are unknown?—Very few; they are always reported to the Magistrate.

Mr. James Richard Martin examined by the Attorney-General.

Have you sent in a return in this form?—Yes.

I think all that we need ask you now is as to whether there has been any increase or decrease in cacao stealing?—I have been a very long time at this business, and notice that thefts always increase and decrease as prices go up and down. At times we have had no thefts; the cacao was not worth stealing; at times again when cacao was at 120*s*. it is impossible; you have an idea of what we went through. I can give you my own experience. I came out from home in 1888. Cacao then was beginning to rise. It was selling very well; the man looking after the place did not understand the business, and I found when I came out that the place was virtually in the hands of thieves. I could not find an honest man anywhere amongst my own people or around me with the exception of an old korala. By great exertions I captured a great number of these men. I speak generally, but I think 25 per cent. of my crop was stolen. I captured a number of these men and got them punished—a great number; I could not say at present how many. The result was that my house was burnt over my head, my wife was poisoned, I was fired at, my servants were intimidated and made to leave my employment. I had petitions sent against me to every possible person who thought the petitions good, otherwise why should I be injured? As long as cacao was up to 120*s*. my experiences were more or less of that kind. Then it went down, and in 1893, 1894, and 1895 prices were lower. I did not trouble at all or very little, knowing that I could crumple it. As prices go up and down so thefts go up and down.

How long is it now since stealing has actually been bad in consequence of high prices?—Well, I should say it was distinctly bad in 1901. At the beginning of 1902 the native traders in Colombo had overstocked themselves completely. In fact, a great many of them were almost bankrupt, and they could not sell it. I know that cacao which was sold here in Matale for Rs. 40 was sold again in Colombo for Rs. 27. They could not sell it; stocks were enormous in Colombo, and thefts ceased. It might be due to the rural police. I think the rural police did a very great deal of good over the small area over which they were worked. There is the coincidence that when cacao was unsaleable thefts stopped. That is my experience for a great number of years.

Have you watchmen on your estate?—Yes, I have spent a great deal on watching. I have 1,137 acres in bearing, and I spent Rs. 3,600 in watching that. These cacao thefts vary on different estates. On some estates there is not so much stolen as others.

What is your experience of the efficiency of watchmen?—Well, the watchmen I employ now are men from the Punjab, and I find them very good, but very expensive. Last year, to give you one instance, an estate we had bought was being worked at a loss, or we only just made it pay, and we had to spend Rs. 2,000 on watchmen, although not making any money out of it.

Have you to import these on purpose?—They come down here for the crop season.

Mr. Haughton: Are they Sikhs?—Not Sikhs, but Mohammedans from the Punjab. I find them very fine, honest, and reliable men, but very expensive. I only made off my cacao last year about Rs. 16,000. I spent Rs. 3,600 on watchmen. That is a most frightful tax. Put that on to any industry and it can hardly get along.

Have you the police on your estate—the rural police?—I had; I think it was in 1900. That was before the system of working with the headmen was brought in, and they were perfectly useless. They were worse than useless; they robbed me. I put my store in charge of the rural police, and they lived as close to the store as we are to the Police Court down there; in fact very few yards off. I thought that was what they could at least do. They were in charge of my store for six weeks, and as the crop was coming in very fast you cannot actually check the crop until you get a lull and you are able to measure out. You cannot check it when you are getting in between 20 and 30 cwt. a day. You are too crowded; you cannot check it every day. When I measured out at the end of six weeks, as far as my figures worked out, I was 15 cwt. short, representing a loss of Rs. 2,500. That is my experience of the rural police under the old system.

You think they have improved now?—From what I hear, it is not the rural police at all; it is the headmen. They have been very highly paid and made to do their work. Here is a case of

1,600 acres that was put under the rural police system. It cost Government, not us, Rs. 2,881·50 and in addition to that the planters spent Rs. 4,000. I wish to point out that this Rs. 2,881·50 so spent only represents three or four months of the year. There was only the spring crop. This year it was a small one, and therefore the rural police was not applied for, but if they had been applied for, if the crop of the entire year had been included, you would have to put 75 per cent. on that if you are going to protect the crops of the year. (Witness read out a list of the plantations brought under the rural police system in the Matale District.) The cost for watchers to Government for watching those estates for four months worked out at Re. 1·80 per acre. If the same watching had been done for six or seven months, it would have cost Rs. 3 an acre, but the cost to Government of watching these five estates, one of which is of 55 acres, worked out at Re. 1·80 an acre. The planters spent on those estates Rs. 4,004. That shows they were not neglecting their work. On each of the five estates on which this system of watching took place an average of Rs. 800 was spent, and the total cost of watching each estate by the Government and the planters was Rs. 1,377·11, and one of them was only 55 acres, the total cost per acre being what was actually spent, Rs. 4·16. If the rural police had been used for the whole crop, it would come to Rs. 5 per acre at least, probably a little more. It had been estimated that if this system was applied to the whole of Matale, the cost of watching our cacao would be Rs. 50,000 for the district. The gross value of the cacao, taking it at the high valuation of Rs. 40 per cwt., is Rs. 680,000, so the estimated cost of watching would be 8 per cent. on the gross, which is 18 per cent. on the profits.

The Attorney-General: Of course, that is extremely high. Who are the thieves? In your opinion, as a rule, are they the villagers?—A good many of them, yes. A good many villages where thieving flourishes are perfectly well known. There is a village where I live on the boundaries of two Provinces, the North-Western and Central, and I was being greatly robbed by men from the north-western side. I complained to the then Government Agent, the late Mr. Fisher, who came up and I met him down there, and he got the headmen around him and asked "Where are the men who rob Mr. Martin?" and they replied, "They are here, there is a gang of sixteen men. They all make their living out of robbing Mr. Martin," so it is perfectly well known.

Who are the receivers?—Generally well-to-do men. There are two or three branches of receivers. A man lives close to your estate and may have a garden just over your boundary, because under the present law once he crosses the boundary you cannot touch him; if he crosses your boundary he is safe.

Not if you know him as a thief. How are we to deal with the evil, Mr. Martin?—I have never varied in my opinion. I gave evidence before the last Commission. We want the same protection for ripe cacao as we have for unripe.

That is, on the right lines; and to say that any person who has any cacao in his possession is obliged to be called on to account for it?—"That he may be called on." Supposing that a man is brought into court under highly suspicious circumstances, under the present law you would not be able to convict him. What I contend for is that the Magistrate should have the right to say to him, "Where did you get that cacao?"

That is, if any man had any cacao in his possession reasonably suspected to be stolen, you should presume it to be stolen unless he proved the contrary?—I do not mean to say, give a man the right to catch hold of another man. I do not think it is any more difficult. When your cacao is stolen you give information to the nearest headman, and he carries out your instructions. He does what he thinks right. I think the same thing would hold in regard to what I propose. You tell the headman you think the cacao is stolen. The planter is not likely to tell him so unless he has good grounds. The planter has no earthly object in coming into Matale and attending court. It is just the thing he does not want to do. He is not likely to give false information to the headman or even mistaken information. You tell the headman you think the cacao is stolen, and ask him to find the cacao. We constantly find the cacao, and are not able to bring it home. We almost always find the cacao.

How do you find it—hidden anywhere?—The headman very often finds it in the man's house. If he is a good man and does his work, he generally traces it and finds it in such and such a house.

Mr. de Saram: Mr. Martin says, "If he is a good headman." Does he suggest there are bad headmen who abuse that power?

Witness: He does that now. You tell a man now that you have lost cacao. He goes about and finds it for you; he very often finds if for you.

The Attorney-General: Supposing he finds stolen cacao or cacao believed to be stolen, he asks the man, "How did you get that cacao?" Or he would under the amended law, and he says, "I got it from my estate." Would you be able to check him in that way?—I think so, it is the only check you can impose. That is the point where Mr. Alexander's tundu system comes in. He does not allow any man to remove cacao without a tundu. If that is made legal, the logical conclusion of that system is that when a man removes 10 cwt. off a garden which only gives one, he should be made to account for where the other 9 cwt. came from. That is the logical conclusion of that system.

Mr. de Saram: They do not remove in such large quantities; it is the man who takes away in small quantities.

Mr. Martin: I have seen a cart load go off very often from a receiver near me, and I know, although I cannot swear to it, that it was stolen from me.

Mr. Haughton: What exactly is Mr. Alexander's proposal in regard to removal or possession?

Mr. de Saram: It cannot be removed without a tundu from the headman.

The Attorney-General: The danger of that is that it puts enormous power in the hands of headmen to levy blackmail, especially if they know that it is stolen.

Mr. de Saram: The European planter also sells his cacao to the native?—Last year a great deal was sold. That is the only year that much has been sold. Last year in round numbers 1,150 cwt. were sold, and 115 cwt. the year before.

Mr. de Saram: And possibly these are the very men who receive stolen cacao.

The Attorney-General: Under the old Coffee Ordinance I see it was only green coffee that a man could be called upon to account for. As to cacao, is it possible to have any such limitation as that?

Mr. Martin: It is no use to us, and I think Mr. Dunuwille will tell you that it is virtually a dead letter.

The Attorney-General: That law has expired long ago.

Mr. Martin: I could explain to you why the possession of green coffee was made an offence. Green coffee was of no use to anybody, and the possession of it meant that the bushes were stripped, as they were at night. Coffee grew out on a long branch, and the fellow could not see

what he was doing, and he went down the whole branch with a sack and took every bean off, and so the possession of green coffee was made an offence.

The Attorney-General: The reason for having it only "green" in the Ordinance was that it was felt it would be extremely hard to call on every man to account for all the coffee in his house. Unless you had a word of that sort in the Ordinance, a man could be called upon to account for coffee in his kitchen. That is the reason you had the limitation, and that is the thing that is necessary, if we can have something of the same sort as to cacao and at the same time avoid an abuse of the power. It is a strong order to oblige a man to account for all the cacao he has in his house. For instance, to go into a store in Colombo where a man has hundreds of hundredweights and ask him to account for that. If you had a limitation as to fresh or green or uncured, it is not so unreasonable.

Mr. Martin: No one picks green cacao. As I have said, if you have dried and undried cacao, you will have endless litigation.

The Attorney-General: I am afraid no one will ever pass a law so drastic as to oblige people to account for all cacao, perhaps ten years old.

Mr. Martin: It does not seem hard to me, and I send away as much as any man. Any one can come to me and ask, "Where did you get your cacao?" I can produce my books to show that I am speaking the truth. I see no hardship in it myself.

The Attorney-General: Supposing a man has his books in bad order, he might be harassed a great deal and be perfectly honest?

Mr. Martin: I do not think so. You see, the picking of cacao is merely the thing jotted down. I pick 50 boxes one day, 10 boxes to-morrow. Those are the only figures you want to see. He must be a very careless man who cannot keep his account that way. He knows what boxes of cacao he ought to turn out.

The Attorney-General: But the law would also apply to a dealer or a trader or to a merchant in Colombo, if you had it in wide terms.

Mr. Martin: Exactly so, to every one, and it would be a very excellent thing if it was applied to the merchant in Colombo.

The Attorney-General: It is almost hopeless to attempt to have a law in such wide terms as that. It ought to be limited in some way.

Mr. Martin: They have it in other Colonies. The Grenada Ordinance was amended so as to include it. (Witness read the law as amended.)

The Attorney-General: There is no objection to that.

Mr. Martin: It would have to be supplemented by a Receivers' Ordinance. There is the Mauritius Vanilla Ordinance.

The Attorney-General: That is extremely strong; the pods are marked.

Mr. Martin: We have often tried marking the pods in Matale, but it is stolen quite as freely.

The Attorney-General: As soon as the husk is removed the mark is gone.

Mr. Martin: On one occasion a man marked the pods on half the number of his trees. The thieves carefully left the marked pods and took all the rest. On another occasion they took the marked pods and left those not marked; they were ripe.

Mr. Haughton: Is cacao always removed in seed or with the cover?

Mr. Martin: Always in seed.

The Attorney-General: In what time is cacao removed from estates? What is the outside time? Does it remain long on the estate after it is picked?

Mr. Martin: It is picked, say, on Monday, and the universal custom of the country, both native and European, is to then heat it and ferment and wash it on Wednesday. It is forty-eight hours before you can do anything with it at all. If you get three days good sun it is safe, but not marketable. The inside may sweat again. Unless you get four days of good sun you cannot say that your cacao is safe. If you get bad weather, it may take you up to any time, say ten days, to cure it.

The Attorney-General: I do not know how it would work to oblige people to account for uncured cacao.

Mr. Martin: I do not know that that would help us at all. It would hardly go far enough.

Mr. Haughton: How long is the seed kept in the store after washing and fermenting?

Mr. Martin: We get it away as fast as we can.

Mr. Haughton: A fortnight or a week?

Mr. Martin: We get it off as fast as ever we can—as fast as we dry it.

Mr. Haughton: Would it be any hardship to restrict the removal?

Mr. Martin: The Madras Ordinance is supposed to be a very perfect one. It is quite inoperative, and the reason given is that any man who has a garden can steal as much as he likes and say it is the produce of his garden. That is the reason given. So if a Receivers' Ordinance is to be drafted to supplement this, it is quite beyond my powers to do so. I can make no suggestions with regard to that. I shall be very happy to give my opinion on any point which may arise, but I do not think any Receivers' Ordinance would ever be operative in Ceylon.

The Attorney-General: You advocate, in short, that everybody should be called upon to explain the cacao that he had in his possession, and if he cannot he is to be guilty of an offence and punished.

Mr. Martin: It is not left to the discretion of everyone, but it is left to the discretion of the Magistrate; that is the point. When he finds there is a strong suspicion against a man, and yet that the law as it stands is not sufficient to convict him, the Magistrate should have the power to call upon that man to account for his cacao. I do not see the hardship in that.

The Attorney-General: And supposing he fails to do so, he is to be guilty of an offence and punished.

Mr. Martin: Yes, just as it is with unripe produce at present.

The Attorney-General: Will not a man often be able to say it came from his garden and evade the Ordinance in the same way as in Madras?

Mr. Martin: No doubt the Magistrate would be quite able to see through such an offence as that.

The Attorney-General: In India apparently they are not.

Mr. Martin: By the Indian law they cannot call upon a man to account; that is just the point.

Mr. Haughton: How would you satisfy the Magistrate? "You must show me something," the Magistrate would say, "that this man practised habitual receiving of cacao," in the same way as before he issues a general warrant for gambling the police have to satisfy him by affidavit that gambling is going on more or less at a place to enable him to issue a warrant. How would you satisfy him in this case?

Mr. Martin: I would suggest you get this case from the Police Court, No. 16,338. There is a case in which the Magistrate had no doubt about the cacao being stolen, and gave me back the cacao because it was mine, and yet he could not convict the man. If you have a Magistrate upon whom you can rely, he can be relied upon to call upon a man to explain. I think the discretion might be left in his hands.

Mr. Haughton: You said you would not ask the Magistrate to do it in all cases, only in cases where after inquiry by himself he had reason to believe that the cacao had not been come by honestly.

Mr. Martin: Yes, you would have to depend upon your Magistrate.

Mr. de Saram: The Magistrate must have some material before him.

The Attorney-General: A man must be convicted on substantial evidence to stand examination in appeal?

Mr. Martin: That is so in all cases. You have it here now. The law exists. If there is a handful of unripe cacao in a bushel, then the law is exactly what I say.

The Attorney-General: It is because the man ought not to have any unripe cacao in his possession, and if he does it ought to be perfectly easy for him to account for. He has other ripe cacao; that is a different question.

Mr. Martin; With regard to unripe, it will be more stringent—he has to account for it whether the Magistrate calls upon him to do so or not. In cinchona bark a man had to account for it. No one ever objected to that. The history of that was, there were some men living at Gampola with small cinchona gardens. They were the receivers, and to get at these men the Ordinance was altered. I never heard that any honest man was injured by that. The same thing is done in other countries. It is carried out in Ireland. Does the Timber Ordinance press unduly?

The Attorney-General: In some places it does.

Mr. Martin: Then there is the Cattle Ordinance.

The Attorney-General: They have to be branded in some way.

Mr. Haughton: There is a difference made in proclaimed and unproclaimed districts. In proclaimed districts it is required that any person removing timber should show a pass; in unproclaimed districts he was prohibited from removing timber only from Crown land.

Mr. Martin: Further, the Forest Officer has the right to go into any man's yard and examine his timber, so that it covers not only removal but possession.

The Attorney-General: If we could limit the possession of cacao, it might pass. As it stands now it is too general to be accepted. Can we say anything according to dryness and age?

Mr. Martin: An Ordinance which gave full power of examination on the high road before it has been removed would be well, supplemented with a Receivers' Ordinance to enter a man's house and make him account for the cacao in his possession.

The Attorney-General: How about the proposal to have all the dealers licensed? Is that a good thing do you think?

Mr. Martin: It would be part of the Receivers' Ordinance. My idea is to change one word, without the necessity of any further legislation.

The Attorney-General: Also removing cacao by night, that might be prohibited.

Mr. Martin: That might be rather a hardship. I am compelled to remove my cacao at night.

The Attorney-General: Without the production of a waybill from the owner. The carter holds that from you.

Mr. Martin: That would give every one a way out of it.

Witness handed in a notice* drafted by Mr. Alexander signed by 700 natives.

Mr. James Anderson of Bandarapolla was next questioned by the Attorney-General.

How much cacao have you?—224 acres.

What is your opinion about the increase or decrease of cacao stealing?—It varies according to the market value.

If the market is high, you think cacao stealing is high?—Yes, I think so. I had the rural police during the last two years. They did very well.

Had you any stealing during those two years?—I do not think I had; none that I found out. Just before and afterwards I had.

The police and headmen worked together?—Yes; they were paid specially, and it stopped.

Had you any watchmen at the same time?—Oh! yes, coolies.

Are they any good?—As good as we can get.

Not quite first-rate, I take it?—I do not think they are.

Have you thought over the remedy for this evil?—I think if you could make a man give an account of the cacao in his possession—it is a bit drastic, I admit—and restrict him removing it without being able to account for it, it might be a remedy. I am inclined to think licensing dealers would help.

I think it would have an advantage if the Government Agent had power to take the license away from a man if he got a bad name?—I think it might be some check on him. He would have to keep books, and have to enter where he got the cacao from and who he got it from.

And if he had a garden of his own?—Quite so.

And as to the amendments requiring a man to explain how he possesses any cacao, is it possible to draw the line between ripe and unripe?—I do not think it is possible to draw the line.

Or "recently plucked" or anything of that sort?—I do not think it is possible. I do not see how you could.

It is a reasonable thing to ask a man to explain how he got any cacao only received for a fortnight; but if he had had the cacao for a very long time, it does become hard to say that he is guilty of an offence if he does not account for it.—On estates we have to keep account of our cacao. Why should not everybody else do the same?

It is the way of your business to do so. It is no hardship to you, but he would be put to some trouble. Have you had any cases in court?—I have had a few; sometimes they have been convicted. In one case the man happened to have green pods in his bag with other ripe cacao. Mr. Dunuwille convicted him. But for that he would not have been convicted, although he was caught just outside the boundary on the minor road. I do not think he had a garden of his own, but he could not be called upon to say where he had got it. It was a very strong and clear case. He was 20 yards from the boundary on the minor road, and yet he could not be called upon to account for possession.

And who are the thieves mostly?—I think village vagrants, as far as I have seen.

---

* See post-Appendix C for copy of notice.

Not the more substantial villagers of the country?—No, I think the thieves are the men who hang about doing nothing; it is so with me.

Who do you think the receivers are?—I fancy they are traders in Matale, as far as I know. There are some men along the roadside, but it is very difficult to tell.

Are these estates fenced?—Oh, dear no; it would be impossible.

Mr. Dunuwille: Messrs. Finlay, Muir & Co.'s estates are fenced all round; there are 4,000 acres enclosed within a wire fence.

Mr. Martin: And they had seventy thefts in spite of the barbed wire.

Witness: They throw a few cocoanut trees on top and get over it easily.

(Proceeding, Mr. Anderson brought one case of his to the notice of the Commissioners, in which a Sinhalese man and a Moorman were charged. The Sinhalese confessed that he had stolen the cacao, and the Moorman denied it. The Sinhalese got two months and the Moorman got off. The Moorman actually came back and pointed out where the theft had taken place.)

Bastian de Silva, living at Matale, was examined shortly by the Attorney-General.

How much cacao have you got?—150 acres.

Have you had much stolen?—Yes, Sir, from one of my properties, a very small place of about 25 acres, nearly half the quantity was stolen last year and the previous year also. Out of two of the properties I did not lose anything at all. A small quantity was stolen from an estate of 50 acres.

At the place where half of it was stolen, did you have a watchman there?—Yes, I had watchmen. It is all surrounded by villagers and boutique-keepers.

Had you police on the other estates?—No, Sir.

But you had your own watchmen?—I had two watchmen.

Has there been any increase or decrease?—Well, Sir, last year on Aluwihare estate there was a decrease.

Why was that?—Mr. Alexander had taken great interest in the suppression of cacao thefts, and the price of cacao had run down. Those two causes contributed to the decrease.

In former years has it been bad?—In the beginning of 1901 it was bad, and more thefts occurred before that year. When the price of cacao averaged Rs. 100 a cwt. there was a lot of thieving. It depends very much on the price.

How do you think it should be stopped?—It is accounted for a good deal by these Moorish people waiting on the road to buy stolen cacao. They sometimes go to the villages and are sometimes waiting on the different roads. If that is stopped, and if people buy at different places, those places must be registered, and small properties adjoining estates must be ordered to sell their cacao by their own receipts. They should be made to produce a receipt for all the produce they sell. You can then find out what quantity of cacao they have been selling.

Every man who sells cacao must give a receipt to the man who buys it?—And be signed by him, and if he cannot sign his signature he must get a respectable person to sign for him—the arachchi or the headman of the place.

I suppose the arachchi or headman would ask a trifle for his services?—In that case let him get two good witnesses to sign it.

How about these Moormen? Are they the people who have got shops, or strangers?—The people who have got shops lend money to the small merchants, who go with a pair of scales and wait at different points and buy cacao. They buy anything they come across, either dried or undried. They bring it to the shopkeepers, who get it dried and sell it. They mix some colour and dye it before the cacao is sold.

Have you had any cases in court?—Last year one; the previous year one. A woman had stolen 28 pounds of dried cacao. She was caught before she came on to the road. If she had gone one chain further there was a man waiting to buy cacao. She was brought up and sentenced to three months' rigorous imprisonment.

You have heard the proposal that Mr. Martin has made about people being obliged to account for any cacao that they have in their possession. Would that work? Have you considered the proposal?—Under the present law we have to catch the thief, and we cannot prove that the produce belongs to us. Therefore he will not speak anything when brought to court. He ought to prove whence he got the cacao; that is the Ordinance that we require.

You do not think it would do if he was only required to explain the possession of uncured cacao or undried cacao?—No, because there is a kind of cacao which squirrels and bats are used to eat and drop down. The coolies pick it up and sell it. It is very difficult to identify it.

Mr. de Saram: If he is in league with another villager who owns a few acres, he will bring him forward?—Mr. Alexander's suggestion is that he should make an estimate of his crops. If a system of assessment is carried out, it might be a check.

The Attorney-General: Supposing a man has over-estimated his crop, has made it 150 cwt. and he only has 100 cwt. He will steal the other 50 cwt. to make up the assessment?—In that case probably. There are people with small properties, people who come from the low-country and settle down in buildings. They are the parties who do the mischief and the Moormen who are trading.

Mr. L. R. Rudd.

(Witness, in answer to the Attorney-General, said he had filled up the form supplied to him. He was on Marakona, 600 acres.)

Has stealing increased or decreased?—We have had rather less than usual. The season is just finished.

To what do you attribute that?—I think it is due to a great extent to the extra trouble which has been taken by Mr. Alexander.

And the fall of the price?—Yes, I think that has also had something to do with it.

Have you had the police?—I have had the police. I was very disappointed with them, and I do not intend to try them again.

How long ago did you have them?—Two years ago, in 1900 and 1901. I do not think they were well organized. They were not looked after at all.

Mr. Dunuwille: That was the first year the police were stationed on Mr. Rudd's estate.

The Attorney-General: How many watchmen have you employed?—From eight to fifteen. Fifteen is the highest number I have ever had.

Have you had natives of the Island?—Yes, Tamils, Sinhalese, and Moormen.

How have they served you?—Some very well, and some I found practically useless.

Have you had a large amount stolen altogether, do you suppose?—I think it is very difficult to say what you have stolen, or what percentage of your crop is stolen. I have had one robbery out of the factory. I lost 1 per cent. of the crop for one year actually out of the factory.

That is a different form of stealing, and comes more under the form of house-breaking?—It was done by some people who did not live far from me—6 or 8 miles away.

You know who it is pretty well?—Not in all cases.

Have you formed any idea as to the best means of stopping these thefts? Have you any remedy?—I think what Mr. Martin suggested is about the best. Of course, the difficulty is to make it workable. The difficulty is to make it so that it will not be too sweeping and too great a hardship on people. We have to keep an account of all cacao when we send it away.

Have you had any cases in court, and how have you fared?—I have had several, and have done fairly well considering all things. There was one case where one of my kanganies going through a field between 4 and 5 in the afternoon saw a Sinhalese man actually picking cacao. He took hold of his top knot, when the man took out a knife and slashed him across the wrist. The arachchi was sent for, but did not come till 8 o'clock next morning, and I unfortunately did not go next morning, and I could not swear to the fact that the trees had been stripped or not. The arachchi swore that the trees had not been stripped, and the man was acquitted.

How about the assault?—He was not charged with the assault at all. Within twenty-four hours of his release he was caught and convicted of another theft and got six months for that.

Have you any suggestion to make?—A good deal of thieving is done by my Moorish neighbours. They are settled there. They have advanced money to Sinhalese in years gone by, and have regularly settled down and got the bulk of the lands there.

Mr. de Saram: Have they got any plots of ground in the centre of your estate?—Yes, they have.

The Attorney-General: I suppose if dealers were all registered it would do some good, would it not?—It would for a short time. If his license was stopped, his brother would go and take out one next day.

Supposing that each seller was obliged to give a certificate and have his sale entered into the dealer's book?—Yes, that would be a good thing; as matters are now, these dealers keep no books at all.

Mr. Daniel Joseph, living in Matale, questioned by the Attorney-General.

(Witness said he had 25 acres of cacao in two places.)

Have you had much stealing?—I have.

Is stealing as bad as it used to be?—It depends upon the price. The present price is rather low, and stealing is rather low. When the price is high stealing increases. There are small gardens near my land tenanted by villagers and Moormen. I have had cases in court; some were acquitted. It is very difficult to prove; we cannot satisfactorily prove whether the cacao was stolen, and often the thieves are people who have cacao of their own.

Have you thought out any scheme of dealing with these thefts?—I strongly support the idea that traders should keep books and enter the quantity of cacao they buy, the name of the person from whom they buy. The boutique-keepers who deal in cacao should be licensed, and the tundu system should be introduced. The man who sells cacao should give the trader a tundu certifying the quantity that he has sold.

Either signed by himself or two respectable householders?—Yes, I certainly do not agree that the tundu should be taken from the native headmen. It would only give them the increased powers alluded to. I would further suggest that the illicit sale of toddy is the chief cause of cacao stealing. Each villager has in his compound a couple of kitul trees. He does not know how to dispose of the toddy. The manufacture of jaggery entails a good deal of labour, and so there is a good deal of toddy illicitly sold, and the secrecy observed in selling toddy brings in many of the villagers to go in for toddy drinking, and in order to find the money for it they go and steal cacao.

Have you had any experience of the police?—No, I cannot give a very satisfactory account of the police.

How long ago have you had them?—I never had them myself.

On the whole, they are not particularly good, you think?—I do not think they are particularly good.

Mr. Martin: Might I ask Mr. Joseph a question. Mr. Joseph, you headed the deputation to the Colonial Secretary representing the traders of the town?—Quite so.

What is contained in the memorial produced is virtually what you asked?—It was not only traders but native cultivators, and that was what we virtually put before them. We circulated the list and obtained some hundreds of signatures, Mr. Bastian de Silva obtained some twenty-five signatures also.

Sixth Sitting: held at the Victoria Commemoration Buildings, Kandy, on October 12, 1903.

Present:—The Hon. Mr. A. G. Lascelles, K.C., Attorney-General (in the Chair), the Hon. Mr. S. Haughton, and Messrs. T. C. Huxley, A. C. Kingsford, and Peter de Saram.

Dingiri Banda, examined.

I am of Matale District. There is much cacao stealing in that part, mostly by Sinhalese villagers. They sell it to the Moorish traders. Of late theft has increased. Of late villagers have cultivated cacao, formerly only Europeans. Hence the tendency to steal and mix the cacao with their own crop.

Rural police had not much effect.

Yattewatte and Letchimi estates were patrolled by rural police. I am not sure if they had any police in 1902.

Tamerawella and Alloowiharie were other estates protected by police. I know nothing personally of them.

Mr. Alexander has been active during the last two years. His system has had a good effect. I think stealing is in some respects less since his advent.

There are watchmen on most estates. Some are good; others not. When true cases are taken the proctors get round these watchmen and get the thieves off. In cross-examination they elicit all sorts of things from witnesses, and the cases break down.

I think the licensing of dealers and compulsory keeping of books would do good. I think if cacao could only be removed on production of a pass, it would make stealing more difficult. I do not think it would be a hardship, though a bad headman might be harassing. As to making the possession of uncured cacao an offence, I think there would be no hardship in that. I succeeded in every case I took before the court during eighteen years of office as korala. Moormen generally purchase cured cacao. Cacao is rarely sold in the pod, except to oblige a friend. I remember when cattle stealing was very bad on the Yattewatte boundary. A Magistrate used to go round and inquire on the spot. I have heard that was very successful. The Magistrate can get at the truth on the spot. There are outdoor proctors who get at witnesses. I should say most cases are reported to the Kachcheri, sometimes the proprietor, sometimes a sergeant of police, is complainant. The arachchi does not institute cases. It is mostly the owners who do so. The ordinary village grower would not object to more stringent legislation. I have a little cacao myself. They steal from that.

Mr. William E. Lyall, examined.

I am of Alloowiharie. I have 380 acres in bearing. I have been in charge three years. Theft has now decreased. I never took a doubtful case. I cannot estimate the amount of cacao lost. The cause of decrease is first the slump in cacao. The fall in price is very rapid. Another cause last year was my extensive protection by constables and headmen. I paid four constables, and there were eleven others. I twice found them absent from their posts. They required careful checking. With the four constables paid by me, eleven others, twelve watchmen, and the headmen thieves had no chance. I had no thefts last year. When I took charge the previous superintendent thought a small number of watchmen was sufficient, one for night and one for day. I put on a big gang. The result was I got a record crop. A fair sample fetched 105*s.*, now less than that. I got hold of a receiver. His boutique was full up with cacao. I got a conviction, I think, for six months. I think that was inadequate. I think receivers ought to be lashed. I had other convictions. [Witness referred to two cases where he said the evidence did not suffice, and complainted of the state of the law as to the requisite amount of proof.]

Ninety per cent. of my coolies drink toddy. I have seen them in the early morning under the influence of drink. My estate tools are actually taken and pledged for drink. There is a lot of illicit toddy selling near my estate. Another reason for stealing is that they take cacao down to Alloowiharie caddies and exchange it for food stuffs.

I can get a better price at my store door for cheap grades than in London or Colombo. I do not know why. The cost of upkeep is excessive; that is to say, the cost of headmen, &c., to keep down thefts. It was 6 per cent. of my net income, exclusive of what Government spent. A Receiver's Ordinance will not catch everyone; for instance, a cooly in the lines. A licensing of dealers, who must also keep books and buy only at their licensed stores, would be useful. The hardship is to have to prove the theft if the cacao is ripe. I find it in the cooly's lines. He has none of his own, but I can do nothing. I would have a presumption of guilt in the case of a cooly, whether the cacao be ripe or unripe. I would have an Itinerating Magistrate during the cacao crop for the Kurunegala, Dumbara, and Matale District—a capable and experienced Civil Service Magistrate.

Mr. Claud Kriekenbeek, examined.

My estate is in North Matale of 750 acres; there is a good deal of undetected theft. Theft has decreased with the fall in price of cacao. I have never had the rural police. I have twelve watchmen a day throughout the year, of whom two or three are efficient. The Sinhalese villagers are the thieves. The receivers are Moormen pedlars. I would advocate a Receiver's Ordinance; buyers to have books of all transactions, with sheets of sales and counterfoils open to inspection; all to be licensed to sell and buy only at a certain place; no transaction to take place between sunrise and sunset.

I had four cases in three years. Three were convicted. The fourth case failed as the accused was a grower, and I could not identify the cacao, although his trees were not in bearing. I would have a law to account for the possession of all cacao. I approve of having an Itinerating Magistrate in crop time. It is no hardship to compel dealers to sell only within the gravets of the town. I am in favour of requiring a tundu or permit for the removal of cacao. The coolies pilfer a good deal.

Mr. Harry Storey, examined.

My estate is Warakamure, South Matale. There are 80 acres altogether. I have been there ten years. Sixty acres are on one estate, about 20 on the other. The 60 acres have been six years in bearing, and on that estate I have only known three cases of theft: one a bad case, in which I got a conviction. The villagers are agriculturalists, and have no incentive to steal. As to the 20 acres on the other estate, I have more cacao. I have now only the other 60 acres cacao bearing. The easy disposal of stolen property is a difficulty. I am in favour of a Receiver's Ordinance. I think mere registration of sales would be insufficient. I would have the power of inspection at any time of books. I would trace the transaction from the dealer to his vendor and make him account for the possession of cacao.

Mr. J. R. Martin, re-called and examined.

I approve of the suggestion of an Itinerating Magistrate, with power to call on a man in his discretion to account for any cacao. I do not think the Receiver's Ordinance would work. I would do away with the distinction between ripe and unripe cacao. The dangerous men are those with a few trees of their own. I would just have the word "cacao" in the Ordinance.

Mr. A. Van Der Poorten, examined.

My estates are Greenwood, Palisse, and Malgrémoi near Galagedara. I have about 350 acres in bearing. There is not much stealing. I had one case in Kurunegala in December last; it resulted in an acquittal. The Moormen incite the Sinhalese villagers to steal by promising to buy, as in the case of vanilla. Licensing dealers would be a good thing. I ascribe my protection to my having secret police. A proprietary planter is less liable to have thefts than a company totum. A proprietary planter is known to be severe to thieves. Practically I pay blackmail to headmen instead of paying the police.

The Commission then adjourned.

APPENDIX A.

Tabulated Summary of Answers to Questions 1, 5, 9, 10, 11 of Printed Form.

Estate.	Acreage.	Fenced or not.	Watchmen.	Rural Police.	Increase or Decrease of Theft since 1895.
Yattewatta and others of Mr. J. R. Martin	1,140	Fenced; this is no protection	Cost Rs. 3,840 for 1902–1903; not very efficient	An unqualified failure	Fluctuated with price of cacao
Muwagala ...	60	Not fenced	One local Sinhalese; as efficient as possible	Not used	No statistics; little or no theft
Hampshire ...	68	Not fenced; fencing no protection	Two: one day, one night; satisfactory	Employed in 1902, and found satisfactory	Unable to say
Bandarapolla ...	224	Not fenced; fencing useless	Two to six, according to crop; as efficient as can be expected	Employed during last two years, and found efficient	Fluctuated with price of cacao
Ratwatta ...	223	A small portion fenced; useless as a protection	Three in crop time; very necessary	Not employed	Fluctuated with price of cacao
Suduganga ...	313	Unfenced; fencing useless	Four to seven in crop time; efficient	Employed over part of estate; satisfactory	Decrease; due to Assistant Government Agent, Wiharagama Arachchi, and Police
Arduthie	171	Unfenced	One; fairly good	Not employed	Stealing scarcely known
North Matale Group	733	Unfenced; fencing no protection	Ten to eighteen a day; reasonably good	Not employed	Fluctuated with price of cacao
Marakona ...	600	Part fenced with barbed wire	Three to fifteen; some good	Found useless	Decrease in 1902-1903; due to activity of Officials
Pansalatenne ...	100	Unfenced; fencing is no protection	Four in crop time; reasonably efficient	Not employed	No change
Asgeria ...	153, and 74 partly so grown	Unfenced; fencing useless	Three day all year round, six night for last three months of year; a good protection	Employed	No appreciable thefts since 1895
Kepitiyagalla ...	860	Unfenced	Arab watchmen since 1901; excellent	Not employed	No change
Katugastota ...	803½, 500 to 600 in bearing	Fenced, and partly by barbed wire, but no protection	Twenty-four during last crop; need supervision	Tried, but found useless	Not perceptible in either way
Morankanda ...	213	Unfenced; fencing useless	Three permanent, thirteen in crop time, with European head watchman; satisfactory	Not employed	Decreased since 1899 owing to watching
Frankland ...	40	Unfenced	One, and for four months October to January an assistant	Found inefficient	Only one case five years ago
Dekande ...	100	Unfenced; fencing useless	Two night and one day	Not employed	Increase during 1902
Kulugolla ...	30	Unfenced	Not employed	Not employed	No return
Coodoogalla ...	216	Not fenced; fencing useless	Three to five; inefficient	Not employed	Fluctuated with price of cacao
Beddewella ...	160				
Arampola ...	35	Unfenced; fencing useless	Mostly unreliable	Not employed	No change
Moorock ...	104				
Pathragala ...	60	Unfenced; fencing impracticable	Day watchmen always, and 12 night during crop	Not employed	No change
Kabragala ...	20	Partly, and found of some use	Two; efficient, but not very honest	Not employed	Great deal of decrease in 1902-1903 owing to Assistant Government Agent
Medagama ...	9				
Amunehena ...	8				
Tennewatta ...	26	Fenced; but no use to stop thefts	Two; almost useless	Applied for, but not apparently employed	Increase
Meegama ...	350	Unfenced; fencing useless	Four permanent and eight to ten during crop; moral effect great	Tried for two years	Decrease; due to Government Agent and Magistrate
Greenwood ...	510	Unfenced	Two; efficient	Not employed	Decrease
Sunnyside ...					
Palisse ...					
Malgrémoi ...					
Dynevor ...	176	Unfenced	One night, one day	Not employed	No change
Malaoyawatta ...	40	Unfenced	Not employed	Not employed	No theft
Narangaslandawatta	20	Fenced	One watchman	Not employed	Decrease
Kendagolla ...	9	Live fence; useless	Not employed	Not employed	Increase
Welikandawatte ...	50	Unfenced	Two in crop time, one permanent	Not employed	No return
Hingurupiyalwatta...	5	Unfenced	None employed	None employed	No theft

Tabulated Summary of Answers to Questions 1, 5, 9, 10, 11 of Printed Form—*contd.*

Estate.	Acreage.	Fenced or not.	Watchmen.	Rural Police.	Increase or Decrease of Theft since 1895.
Serugollewatte ...	12	Live fence; useless	None; except proprietor and family	Not employed	Increase
Pihillekawa ...	89	Unfenced; fencing useless	Formerly employed, but useless	Not employed	Increase
Tambalepola ...					
Hittaragedarawatte	12	Fenced; it is of great service	One; efficient	Not employed	No return
Maousava ...	157	—	Two permanent, four or five in crop time; useful	Not employed	Decrease
Walawwewatte ...	7½	Fenced	None employed	Not employed	Increase
Mailagahatenna ...					
Marawa ...					
Kanewalganga ...	15	Fenced	None, except two labourers	None employed	No theft
Sapugahawatta ...	16	Half fenced	One in crop time	Not employed	Decrease
Kabaragalla ...	20	Fenced (?)	Three; efficient	Not employed	Decrease
Munugalla ...					
Medagama ...	9				
Ammunehena ...	8				
Welimalla	50	Fenced	One	Not employed	No change
Mahakoswatta ...	4	Fenced	None employed	Not employed	No return
Wewahena ...	5	Unfenced	None employed	Not employed	No return
Mahawela ...	50	No regular fencing	One in crop time	Not employed	Slight decrease
Hettiyawatte ...	10	Fenced, but fencing useless	One; inefficient	Not applied for	Increase
Aluwihare Group ...	308	Unfenced	Six to twelve, according to time of year	Employed from October, 1902, to January, 1903; worked well	Fluctuated with the price of cacao
Meegaloudawatta ...	—	One side fenced	None employed	Not employed	No return
Darandewatta ..	10	Unfenced	One; reliable	Not employed	None
Galwatta ...	6	Fenced	None	Not employed	None
Pahalewatta ..	16	Fenced	One last year	Not employed	Slight increase
Bendewella ...	100	Unfenced	One day, one night	Not employed	Decrease
Polwatta ...	40	Only fenced for cattle	One in crop time	Not employed	No return
Wiharegama ...	100	No fence, but natural protection from river, &c.	Two in crop time, one for store	Not employed	No return

APPENDIX B.

Correspondence relating to Cost of Protecting Estates by means of Police, Headmen, &c.

No. 1.

The Hon. the COLONIAL SECRETARY to JAS. R. MARTIN, Esq., Yattawatte estate, Matale.

Colonial Secretary's Office,
Colombo, June 9, 1903.

Cost of Rural Police.

SIR,—IN reply to your letter dated 7th May, 1903, asking for information as to the total cost to Government of the rural police system in Matale District, I am directed to inform you that the total cost to Government of the police supplied during the last crop season in watching the two groups of estates mentioned in my letter of 2nd May was Rs. 2,881·50. This includes batta, rewards, &c.

I am, &c.,

A. R. SLATER,
for Colonial Secretary.

No. 2.

JAS. R. MARTIN, Esq., to the Hon. the COLONIAL SECRETARY.

Yattawatte estate, Matale,
June 13, 1903.

Cost of Rural Police.

DEAR SIR,—I AM much obliged for your letter of the 9th instant, and beg to point out that the cost to Government of watching the estates referred to comes to about Re. 1·80 per acre. According to the last Central Province Administration Report there are in Matale 10,000 acres of cacao, which in due course will all be in bearing. The cost, therefore, in money alone, of applying this system to the whole district, as has been so strongly advocated by Mr. Wace and Mr. Alexander, would be Rs. 18,000 per annum. I may point out that the available revenue of the whole of Matale District is, according to the Administration Report, some Rs. 36,000 only. So that what has been so strongly and so bitterly advocated is that a sum equal to about half the revenue of the district should be spent in watching the cacao estates. This is what the officials ask for. The planters do not ask that anything shall be spent in their protection, provided that the law enables them to protect themselves.

Faithfully yours,
JAS. R. MARTIN.

No. 3.

The Hon. the COLONIAL SECRETARY to the Hon. MR. A. G. LASCELLES, K.C., Chairman, Cacao Thefts Commission.

No. 015127.

Colonial Secretary's Office,
Colombo, August 19, 1903.

SIR,—I AM directed by His Excellency the Governor to bring to your notice the following facts which have been placed before Government with reference to the amount of money paid as expenses and rewards to headmen in the Matale District engaged in "Cacao Protection Duty."

2. The Auditor-General states that during the second quarter of the current year a sum of about Rs. 1,800 has been paid by the Government Agent, Central Province, to seventeen headmen in the Matale District for guarding about 2,000 acres grown with cacao.

3. I am to request your consideration of this fact, and I am to observe that it would appear only equitable that those estates for whose special protection these expenses are incurred should bear their share of the cost. At present I may remind you they pay only a moiety of the cost of the special regular police, an amount which is comparatively trifling.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 4.

The ASSISTANT SUPERINTENDENT OF POLICE, Central Province, to the Hon. the GOVERNMENT AGENT (POLICE), Central Province.

Police Office,
Kandy, August 22, 1903.

WITH reference to the Colonial Secretary's letter No. P 49 of the 19th instant, I have the honour to report that in cases where special rural police have been established for the purpose of preventing thefts of cacao, the planters benefiting thereby have only been called upon to pay half the cost of the salaries of the police officers engaged on this duty, and when accommodation is not provided on the estate, half the cost of rent of quarters for the police.

2. These special police are established and proclaimed under Ordinance No. 16 of 1865, section 18, which speaks of the planters paying a moiety of the *total* cost of maintaining the force in the district, but according to section 27, as amended by section 2 of Ordinance No. 7 of 1880, under which the charges are recoverable, only the actual pay of the police officers can be charged, so that no part of the cost of furniture, equipment, upkeep of the station, batta, &c., is recoverable from the planters.

3. Further, it has been found in this Province that the special cacao police are powerless to stop cacao thefts, if the headmen of the villages adjoining the estates do not co-operate with them; to ensure them doing so, they are ordered to patrol the estates with the police. They are, however, unpaid headmen, who cannot be expected to do six or eight hours patrol duty a day for nothing, and therefore receive batta at the rate of 50 cents per diem, which the planters do not pay for.

4. I annex a statement of the total cost of maintaining and working the special cacao police at Matale during the last crop season, which shows exactly what the planters do and do not pay for :—

Cost of maintaining and working two Special Rural Police Forces for the purpose of preventing Thefts of Cacao on two Groups of Estates.

	Rs.	c.
(1) Force established October 15, 1902, withdrawn February 15, 1903, to watch group No. 1 (Wariyapola, Bandarapola, and Suduganga estates) : four native constables at Rs. 21 per mensem each	336	0*a*
(2) Force established October 1, 1902, withdrawn January 31, 1903, to watch group No. 2 (Aluvihare, Dickeria, Kaludawella, and Hampshire estates): five native constables from October 1 to December 31, 1902 ; four native constables from January 1 to January 31, 1903	399	0*a*
Rent of quarters for both forces	45	0*a*
Cost of oil	4	50
Batta to policemen on both groups	494	0
Batta to seventeen headmen	998	0
Rewards to headmen	995	0
Total ...	3,271	50

The planters paid half "*a*," that is, Rs. 390 ; Government paid remainder, Rs. 2,881·50.

5. It will therefore be seen that the planters paid about one-eighth of the total cost, while the cost of preventing thefts on these estates for a period of four months works out at Re. 1·47 per acre (acreage of estates 2,221½).

H. L. DOWBIGGIN,
Assistant Superintendent of Police, Central Province.

APPENDIX C.

Special Legislation for Cacao Stealing.

WE, the undersigned, are of opinion that the law as it now stands is not sufficient for the protection of cacao proprietors. We would therefore respectfully suggest some amendment of the Prædial Products Ordinance, which, while continuing to make the possession of green cacao without a satisfactory account of such possession an offence, might also provide against the dishonest possession of ripe and cured cacao. We should also be grateful for any protection against "receivers" which the Government may be disposed to grant.

Name.	Occupation.	Situation and Acreage of Garden.

APPENDIX D.

Table of Convictions for Cacao Theft in the Matale Courts from 1898 to 1903.

Year.	No. of Cases.	No. acquitted.	No. convicted.	No. absconded.
1898 ...	28 ...	18 ...	10 ...	Nil
1899 ...	44 ...	24 ...	19 ...	1
1900 ...	62 ...	26 ...	35 ...	1
1901 ...	64 ...	29 ...	33 ...	2
1902 ...	40 ...	17 ...	20 ...	3
1903 ...	18 ...	9 ...	9 ...	Nil

I.—1904.

SUMMARY OF REPORT

TO THE GOVERNMENT OF CEYLON

ON THE

PEARL OYSTER FISHERIES

OF THE

GULF OF MANNAR.

BY W. A. HERDMAN, ESQ., D.SC., F.R.S.,

Professor of Natural History in the University of Liverpool.

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 10 cents.

1904.

PEARL OYSTER FISHERIES OF THE GULF OF MANNAR.

EXTRACTS FROM A REPORT BY W. A. HERDMAN, Esq., D.Sc., F.R.S.,

Professor of Natural History in the University of Liverpool.

CONCLUSIONS AND RECOMMENDATIONS.

As a result of the observations and experiments given in the preceding pages, or still to be detailed in the Special Reports which will be published by the Royal Society, I have arrived at certain conclusions upon which the recommendations that follow are based. I do not claim that all these conclusions are new. Some are merely corroborations and extensions of the discoveries and views of my predecessors; in other cases we have been able to ascertain new facts and so correct former opinions, or settle points that were in dispute. I believe that we are now in a position to give a sufficiently complete and continuous account of the life-history and habits of the Ceylon pearl oyster to serve for practical purposes, and to enable us to picture with fair accuracy the details of its life-economics, its feeding and breeding, its struggles with enemies and competitors, with sand and with storms, and finally its association with Cestode parasites, and the consequent process of pearl formation.

The conclusions may be stated briefly as follows:—

The pearl oyster, or rather "mussel," of the Ceylon fisheries lives in very pure and clear sea water in the Gulf of Mannar on certain patches of hard ground known as "paars."

The paars are, for the most part, at depths of 6 to 9 fathoms, and those that are best known lie at a considerable distance from land, the Cheval Paar at 9 to 14 miles, the Periya Paar Kerrai at 12 miles, and the Modragama at about 8 miles from the nearest coast. The Muttuvaratu, at about 4 miles off Karativu Island, is the only one where important fisheries have been held that is near the shore. The hard bottom of the paars is to some extent formed of corals and shells, but to a much larger extent by a modern "rock" now forming *in situ*. This may be called a "calcrete," as it is composed of the sand and neighbouring organic remains cemented into a continuous hard mass by carbonate of lime. We have shown that the cementing, although no doubt in part a chemical process, is in places largely due to living Nullipores and Polyzoa, especially the latter.

Where the bottom on the pearl banks is not calcrete, it is formed of a coarse sand in some parts almost wholly inorganic, with large quartz grains, and derived from the waste of the granitoid rocks of central Ceylon brought down by the rivers. Elsewhere the sand is of organic origin being formed by the shells of large bottom-living Foraminifera, such as *Heterostegina depressa* and *Orbitolites complanata*, and of the calcareous remains of many other kinds of animals.

The divers distinguish between a hard bottom ("paar") suitable for pearl oysters and a sandy one which is more or less useless. The sand, however, in the neighbourhood of paars often bears oysters in clumps adhering to a fragment of dead coral, an old Molluscan shell, or more frequently a Nullipore nodule (*Lithothamnion*). Such pieces of natural "culch" are of enormous importance to the prosperity of the fisheries, and the area covered by them might be largely increased by artificial "culching."

The temperature of the sea water in which the pearl oysters live in the Gulf of Mannar is high. In our experience it ranges from about 77° F. in January to close on 90° F. in April. Probably the normal range during the greater part of the year is from 82° to 86° F.

The specific gravity we found to be fairly constant at 1·023 on the pearl banks; at Galle it was slightly lower, averaging 1·022; at Trincomalee in the inner bay, and especially in Tampalakam, it was distinctly lower (1·015 to 1·019). At exceptional spots and seasons in the Gulf of Mannar we found the specific gravity lower than the normal. Off Chilaw in November, 1902, it was a little above 1·019, and on the Muttuvaratu paar in the same month it varied about 1·020. No doubt on occasions of great floods on the land it may be lower still on those paars that are near the mouths of the rivers. There is no reason to think (as has been suggested) that some admixture of fresh water is necessary for the prosperity of the oyster or for pearl formation. On the contrary, exceptional floods are probably harmful to any paars they may reach.

There is a general drift of the water over the banks from south to north from April to September and from north to south during the height of the north-east monsoon, with intermediate periods of calms and variable winds from February to April, and usually again in November. But we are still in want of more definite information (such as can only be obtained by some years of observation and experiment with "drifters") in regard to the usual surface drift during the periods of variable winds between the monsoons before we can be certain of the source of "spat" supply to particular banks, or of the destiny of larvæ produced from our adult oysters. "Drift-bottle" experiments, such as have been recently made for fisheries purposes in several European seas, should be instituted in the Gulf of Mannar. It is only after such work has been carried on systematically for two or three years at least that it will be possible to determine the course taken by the larval pearl oysters between the time of hatching and the deposit of spat, and again between the attachment to floating Algæ and the appearance of young oysters on a paar. These are details which it was

impossible for us to settle in the time at our disposal in 1902, but which will naturally in the future form an important part of the work of a Marine Biologist resident in Ceylon.

The fauna and flora of the Gulf of Mannar, comprising the whole assemblage of plants and other animals, large and small, which surround the pearl oyster, has a profound effect upon the well-being of the oyster and of the pearl fisheries. We took every opportunity of investigating this fauna and flora, and the results are being reported upon in detail. It will suffice to point out here that the microscopic forms floating in the water and captured by our fine silk tow-nets included (1) the pearl oyster itself in its youngest free-swimming stages, (2) its food, not merely when young, but throughout life, and (3) the young stages of the parasitic worm which causes pearl formation; and that the larger forms at the bottom—sponges, corals, star-fish, molluscs, and fishes—are the all-important enemies or fellow-competitors of the oyster (for food and attachment-areas and growing room), which may ruin a bed either by their direct aggressive action or indirectly in the struggle for existence.

We find that the Ceylon pearl oyster is diœcious, or has the sexes separate, not only at any one period, but throughout the life of the animal. Our experiments at Galle have shown that definitely; and there are no traces of hermaphroditism. Emission of the generative products takes place directly into the surrounding water, where the ova are fertilized, and consequently there is no retention of eggs or embryos within the body of the female. The male is stimulated to emit spermatozoa by the presence of ova in the surrounding water.

There is no marked disproportion in numbers between the sexes: out of a couple of hundred collected together, 87 were males, 71 females, and the remainder immature or indeterminate.

Reproduction appears to take place to some extent throughout the year, and stray individuals sexually ripe may be found at any time; but there are two maxima when the majority of the mature oysters reproduce, viz., in March to May and in October to November.

Larval development takes place in the surface waters of the sea, and from our observations we draw the conclusion that the young animal may settle down as "spat" within five days of the fertilization of the egg. At the same time, from the size of some of the larvæ we have found we consider it probable that the free-swimming period may on occasions be considerably prolonged. We were able to rear young larval stages in the Galle Marine Biological Station, and we caught the later ones in the tow-nets on the pearl banks. We found the youngest fixed spat on Zoophytes and Algæ early in November and early in March. All fixed stages from one similar to the latest of the free stages up to young oysters having the adult characteristics of shell were found during March and April attached to both rooted and floating Algæ in various parts of the Gulf of Mannar. The so-called "false spat" (other smaller species of *Avicula*) also occur on Zoophytes and Algæ; but during the times of our investigations there was undoubtedly abundance of the true pearl oyster spat both on filamentous Algæ from the bottom and also on floating *Sargassum* weed.

The spat is actively locomotive. We have many observations showing the rapidity with which it can detach and re-attach itself, and the rate at which it can travel. There is no doubt that in this young stage the pearl oyster can leave the weed to which it first fixes and transfer to a coral or Nulliporé fragment on the paar, or can move from an unsuitable spot in search of a better. Its tendency to climb upwards whenever shaken on to the floor of an aquarium is probably an indication of an instinct to ascend any solid objects on the sea bottom, which must often save it from being smothered in the loose sand.

Our experiments at the Galle laboratory have shown us that not only the young, but also the adult pearl-oyster is able to cast off its old attachment, move to a new place, and there spin a new byssus, and this not once or twice, but repeatedly, up to 7 times in 14 days, as our records show. We do not mean to assert that the oysters have a power of locomotion that would enable them to migrate to any great distance; but our observations have convinced us that they have powers of freeing themselves from sand, of moving to a better situation, of re-attaching themselves when torn off from their moorings, and of repairing injuries to shell and mantle, with which they are not usually credited. All these matters have an important bearing upon some of the recommendations that follow.

We have also shown that transportation of oysters, both old and young, even for considerable distances, such as from the Gulf of Mannar to Galle, a matter of four or five days, at the hottest season of the year, is comparatively easy, if ordinary precautions be taken to keep the water in the vessels as cool as possible and to prevent any decomposition. Transplanted specimens, moreover, flourished in our hands; both at Galle and in the Gulf of Mannar (where some were moved from the Muttuvaratu to the Cheval) the oysters improved in health and grew rapidly in size when moved to a new locality. We have given the details of growth for both old and young oysters in preceding pages. These experiments also were undertaken because of their bearing upon that transplantation, from overcrowded and unreliable paars to more suitable ground, which we advocate.

Some of our experiments give us a very clear indication, which however we could also obtain by observation on the pearl banks, of the kind of foreign objects best suited for young pearl oysters to settle down upon. And this leads us to recognize the value of natural "culch" or suitable hard objects, such as coral fragments, shells, and Nullipores, upon the bottom, and the importance of increasing the available area by the artificial "culching" of the more sandy parts.

We must not try to be too precise in regard to the positions, sizes, and outlines of the paars. Our work in the "Lady Havelock" showed us that some spots around and between them are more or less hard-bottomed, and even in some cases bore oysters, and are evidently capable of becoming paars. On the other hand, it is clear from the records of the inspections that many parts of the known paars may be temporarily, and possibly some parts even permanently, unsuitable for the attachment or rearing of oysters.

We may consider then the whole pearl bank plateau of the Gulf of Mannar as potentially "paar" ground, some parts of it better suited for one purpose and some for another, some parts more constantly covered by the shifting sands, others more regularly bare and hard. It is this that renders possible the farming operations, such as "culching" and transplanting, which we refer to in our "Recommendations."

The history of the pearl fisheries in the past, especially during the nineteenth century, has shown that—

1st.—A number of the smaller paars, which are hard patches of limited extent largely covered with living corals, are practically worthless from an economic point of view.

2nd.—Some, such as the Periya Paar, might be used as most valuable sources of supply of young brood oysters for transplantation, but cannot be relied upon to produce an adult stock suitable for fishing.

3rd.—Others again, such as the great Cheval Paar with its various subdivisions, and the North and South Modragams, the Periya Paar Kerrai, and the Muttuvaratu Paar are very valuable and reliable grounds, upon which most of the successful fisheries of the past century have taken place. Others, such as Chilaw, Dutch Modragam, Alantura, and Karativu, are less reliable, but may be valuable on occasions.

It became clear to us during our work on the "Lady Havelock," when we began to understand why it is that that the Periya Paar is unreliable and the Cheval Paar so much more satisfactory, that the main hope of introducing constancy of result and a regular succession of fisheries must rest upon a system of transplanting young strikes or broods of oysters when they make their appearance upon useless or unreliable paars, to wherever there is room for them at the time upon ground where it is known they will have a better chance of living and growing to maturity.

This raises the whole question of the causes of death of the pearl oyster, the reasons of the intermittence in the history of the fisheries, and the conditions which render some paars more reliable than others.

The following statement gives a summary of our results.

I.—The most important agent in causing widespread death of pearl oysters—both young and old—in the Gulf of Mannar is the shifting of sand due to the strong currents, to the south-west monsoon, and no doubt occasionally to exceptional storms. We obtained a good deal of evidence as to the manner in which the sand is carried about and piled up by the currents and is churned up in places by the strong south-west monsoon, and we made observations as to the effect of burying oysters of different sizes in various amounts of sand. The successive broods which have appeared and as regularly disappeared upon the Periya Paar during the last quarter century have, there can be no doubt, been overwhelmed by the bottom currents caused by the south-west monsoon upon the bank which faces the deep water of the Indian Ocean.

II.—Next in importance come, we consider, the ravages of natural enemies, the most important of which are—

(*a*) Voracious fishes, chiefly rays *(Trygon uranak)* and file fishes *(Balistes mitis* and *B. stellatus).*

(*b*) Boring mollusca, chiefly *Sistrum spectrum* and *Pinaxia coronata*, along with species of *Nassa Murex*, *Purpura*, and *Turbinella.*

(*c*) The boring sponge *(Cliona indica).*

(*d*) Boring worms *(Leucodore).*

(*e*) Starfishes, chiefly *Pentaceros* and *Luidea.*

(*f*) Smothering mollusca, such as *Modiola barbata*, the "Suran," which weaves nests and other entanglements around masses of young oysters, and may, when present in quantity, cause serious mortality.

In regard to the fishes mentioned under (*a*), it is necessary to bear in mind, however, that from the pearl fisheries point of view their influence is not wholly evil, as their ravages are closely associated with pearl production in the oyster. The plectognathid fishes, specially, which doubtless devour many of the oysters, at the same time receive and pass on the parasite which leads to the production of pearls in others. The loss of some individuals is in that case a toll that we very willingly pay, and no one could advocate the extermination of that particular enemy.

III.—There are still three other causes of death that require mention and may on occasions be serious, perhaps disastrous, viz.:—

(*a*) *Overcrowding.*—The older are sometimes buried in masses of younger ones. The young are often piled together in such profusion as to interfere with each other's nutrition and growth. Thinning out must and does take place. If it were done artificially, all or nearly all might be preserved; if we leave it to be effected naturally by survival of the fittest, the survivors may be very few indeed.

(*b*) *Disease*, due to the invasion of parasites, either (1) worm parasites, which are moderately large and usually not very numerous, and which unless abnormally abundant do little harm; or (2) the more minute protozoon parasites which may be present in enormous quantities and probably cause epidemic diseases.

(*c*) *Over-fishing.*—That is, the exhaustion of the breeding stock of the district at a time when no further supply of young in the larval stages were being brought by currents from neighbouring grounds. This will comparatively rarely happen, and is only likely to be serious during the last year of a series of fisheries. So long as there are three- and four-year-old oysters on adjoining paars which will be fished in the two succeeding years, it is safe to take every older oyster that can be got from the ground, as those coming on, although not yet ready to fish, are sexually mature and may be relied upon to supply spat; but in the final year of a series, when no further mature oysters remain for future years, it is important to leave sufficient stock for breeding purposes.

In the future, however, if transplanting is adopted, it may be expected that such a state of affairs as the last fishery of a series, with no younger oysters growing up in the neighbourhood, will be very unlikely to recur.

Turning to pearl-formation, which is an unhealthy or abnormal process, we find that in the Ceylon oyster there are several distinct causes which lead to the production of pearls. Some pearls or pearly excrescences on the interior of the shell are due to the irritation caused by boring sponges and burrowing worms. Minute grains of sand and other foreign particles gaining access to the body inside the shell, which are popularly supposed to form the nuclei of pearls, only do so, in our experience, under exceptional circumstances. In the whole of our observations we have only records of three cases in which a grain of sand undoubtedly formed the nucleus of a pearl. Pearls of another class are found in the muscular tissue of the animal, most frequently in the levators, in the palpar region, and in the pallial insertions. These muscle-pearls have no foreign bodies as nuclei. They form around minute calcareous concretions—the colcospherules—which are sometimes very abundant in the tissues. The best pearls, however, the "fine" or "Orient" pearls, lie in the pallial connective

tissue at the sides of the body or in the tissues around the liver and kidney, or, when large, they may be free in any cavity of the body. The majority of these fine pearls contain as their nuclei the more or less easily recognizable remains of certain Platyhelminthian parasites, which we identify as the larval condition of a Cestode belonging to the genus *Tetrarhynchus*, probably new to Science. We propose to describe it under the name *Tetrarhynchus unionifactor*, in allusion to its connection with pearl* formation. We have traced most stages in the life-history of this pearl-producing *Tetrarhynchus*, and find that it passes from the body of the pearl-oyster into that of the file-fishes (*Balistes mitis* and *B. Stellatus*), which certainly eat oysters, and from these into some larger animal—possibly the large Trygon or Ray—which preys upon the file-fishes. The adult parasitic worm in its last host must then set free its numerous young embryos. These we have found in the sea, and also enclosed in small cysts in the gills, liver, and mantle of the pearl oyster; and we have traced later stages through the body of the oyster and in the peritoneal membrane of the Balistes. But it is not sufficient for the oyster to be infected by the Tetrarhynchus larva. It must also live, retaining its parasite, until such time as it can produce sufficient deposit of the calcareous secretion to entomb the living source of irritation, which thus becomes the nucleus of a pearl. This history is discussed more fully on some preceding pages, and the Cestode parasite will be described, along with the other parasites of the pearl oyster, in a special section of the report. The cysticercoid cysts of the Tetrarhynchus larvæ are frequently very abundant in the liver of the pearl oyster. In the case of some paars, the Muttuvaratu especially, scarcely any of the individuals examined are free; we have counted eleven encysted larvæ in a single liver. In the gill filaments and in their membranous bases also they are common, while in many cases the mantle is infested. The gonads, the foot, and the palps all occasionally harbour the parasite. The muscles are the only large organs where the cysts are rarely found. In one individual oyster Mr. Hornell made out a total of forty-five cysts for all the tissues. It may be well to repeat here that the Cestode parasites are not only common, but are also apparently very widespread and generally distributed; that Balistes with its parasite occurs both at Trincomalee and at Galle as well as in the Gulf of Mannar; and that, in short, there can be no doubt as to the probable infection of pearl oysters grown at these or any other suitable localities around Ceylon.

The results of our cruises in the "Lady Havelock," detailed in the "Narrative," showed clearly the advantages of dredging, both as a method of exploring and surveying the banks and also for the purpose of raising large quantities of oysters from the bottom in a short time. Worked from a handy sea-worthy vessel, of the type of a large tug, or a modern steam trawler with a steam-winch near the stern, the dredge becomes in practised hands an instrument of precision, and will bring up a fair sample of everything on the ground, including the bottom deposit. Moreover, the operation is a speedy one. A line of soundings and dredgings can be run over a very considerable area in one day's work, and a much larger and more continuous, and therefore more representative, sample obtained than would be possible by diving. From such a steamer, on the occasion of a fishery, four dredges at least could be worked simultaneously, as in the case of the steamer "Pyefleet" employed by the Corporation of Colchester in dredging "native" oysters in the estuary of the Colne. There need be no fear that dredging operations would be destructive to any young oysters that may be mixed with the old, or would in any way damage the ground as an oyster paar. Dredging is the usual practice on oyster beds in Europe and America.

Our results on the "Lady Havelock" showed that neither young nor old brought up by the dredge are injured, and it would be a simple matter on the steamer to separate the young and return them to the water or transport them to other ground; while it would be very difficult, if not impossible, to get this done in the divers' boats under present conditions.

On several occasions, as shown in the "Narrative," we found by dredging considerable numbers of pearl oysters on spots not recognized as known "paars." I feel confident, from the nature of the ground and our knowledge of their conditions (such as currents and the free-swimming stage of the young pearl oyster), that new deposits of spat must make their appearance from time to time at new localities, and may appear any time on some grounds outside the recognized paars, and all such new beds will probably remain unknown unless discovered by dredging traverses across the whole oyster-bearing plateau of the Gulf of Mannar. At several localities we examined the ground outside the known paars down to the 100-fathom line, with the view of ascertaining whether there is any evidence in support of statements which have sometimes been made to the effect that there were probably unknown beds of pearl oysters further out and in deeper water, from which spat was produced for the supply of the inshore paars. No such evidence was obtained. All fresh spat which has appeared in the past after grounds have been cleared by fishing must then have come from other beds of adult oysters upon the plateau within the 10-fathom line—beds which have remained unknown and unfished.

In addition to beds of adult oysters which may in this way be found by dredging traverses, it must be remembered that newly-established deposits of young oysters upon unsuitable ground where they cannot mature will be certainly made known from time to time, and this will give the material for re-planting the paars recently cleared by a fishery. Our experiments showed that young oysters are more easily transported than older ones, and more readily re-establish themselves on new ground.

In regard to the fish-trawling operations, I have to report that the greater part of the Palk Bay presents a large open expanse with a uniform soft bottom suitable for trawling. Our hauls in both the north and the south parts of the area showed that there are plenty of fish, and apparently this shallow sea serves as a very valuable nursery for young sea-fish. We also found off Galle, to the east of the Callehogalle bank, at a depth of 25 to 30 fathoms, an area which may be regarded as a fish-nursery. Here it is evident that the young of both flat and round fish, belonging to about ten species, and including such valuable forms as "Soles," "Turbot," and "Plaice," congregate in large numbers.

It would naturally be part of the duty of a Marine Biologist to the Colony to make himself acquainted with the conditions of the native fisheries, and be prepared to advise as to whether facilities should be given for introducing trawling in suitable localities, or whether any regulations are required for the protection of the fish-nurseries.

As an example of an accessory investigation such as would be undertaken by the Marine Biologist, I may note that during our visit in February, 1902, to Trincomalee we found the commercial

* Unio was used by classical writers for the best of oriental pearls.

sponge living in the bay. I asked Mr. Hornell to return later in the year and look into the matter. He did so in October, and was very successful in determining the localities and mode of growth of the sponge, which is the true *Euspongia officinalis*, and very similar to the Mediterranean form. Professor Dendy, the sponge specialist, who has examined samples for me, thinks well of the quality, and says "the possibility of establishing a sponge-fishery is worth consideration."

For the proper carrying out of work in Ceylon it was found necessary to fit up the scientific man's workshop—a small laboratory on the edge of the sea, with experimental tanks, a circulation of sea water, and facilities for microscopic and other work. For several reasons, which have been given fully in the "Narrative" above, we chose Galle at the southern end of Ceylon, and we have every reason to be satisfied with the choice. With its large bay, its rich fauna, and the sheltered collecting ground of the lagoon with the coral reef, it is probably one of the best possible spots for marine biological work in Eastern tropical seas.

It is clear to me (1) that there is still a great deal of biological work that can be done in connection with all the marine fishing industries; and (2) that the laboratory at Galle, enlarged if necessary and more fully equipped, is the best place in which to carry on all such investigations.

RECOMMENDATIONS.

The following recommendations are based upon the conclusions briefly given in the preceding pages, and also upon the detailed evidence in the "Narrative" and other sections of this Report.

1. That dredging be substituted for diving, either wholly or in part, both on inspections and also at fisheries.

2. That a steamer be provided, of the type of a modern steam-trawler, from which four dredgers could be worked simultaneously and fitted with tanks or "fish wells," in which large numbers of pearl-oysters could be transported.

3. That attention be paid not merely to inspecting the known paars, but also to traversing with the dredge at least once a year certain lines across the pearl bank plateau in order to search for new deposits of oysters.

4. That whenever young oysters are found in quantity on the Periya Paar or other localities where there is very little prospect of their ever arriving at maturity, they should at once be dredged up and transplanted to more favourable grounds, to be determined by careful examination of the bottom conditions and the stock of oysters already present.

5. That during an inspection or a fishery when many young pearl oysters are found associated with older ones, the young should be removed, by dredging and sorting, and be saved by transplanting to other paars unoccupied at the time. Dredging can also be made use of to remove great numbers of sponges, crabs, star fish, and other enemies of the pearl oyster from the productive paars.

6. That if dredging be not wholly substituted for diving at the fisheries, at least the dredges should be kept in readiness, so that in the event of the divers failing to obtain sufficient oysters in the limited time, or in case the fishery should be unfortunately stopped prematurely by an epidemic or other unforeseen occurrence, the remaining mature oysters on the bottom may not be lost, but may by means of the dredges be brought to the surface speedily in bulk.*

7. In order to increase the area available for the attachment and growth of young pearl oysters, large areas of the sandy bottom adjoining the more important paars, especially the Cheval Paar, should undergo artificial "culching"—that is, should have calcareous objects, such as fragments of dead coral, dead oyster shells, and lumps of calcareous rock, scattered over the bottom. Such material can be obtained in quantity close to hand on the shores and reefs of the Gulf of Mannar, and the transport and distribution could be effected easily by means of the steamer. All the oyster shells that accumulate on the shore after a fishery should be returned to the paars.

8. In order to facilitate the search for new deposits of young oysters, "drift-bottle" experiments should be made, so as to determine the prevalent currents in the Gulf of Mannar at the breeding times of the oysters.

9. Very young "spat," such as is sometimes found in very great abundance attached to floating weeds, should be saved from being carried away by the currents, and may be deposited on the bottom along with suitable culch to which it can adhere.

10. That in order to determine when and how the dredges should be used, where from and where to, and in what quantities the transplantations of young oysters should be made, where and how the "culching" should be carried out, and similar matters, a Marine Biologist should be appointed as a permanent official to take part in all inspections and fisheries, to advise as to the farming operations, and, if sanctioned, carry out the work and generally to supervise the pearl oyster banks and assist in regulating the fisheries.

11. That the Marine Biologist be charged, as his first duty, with the farming of the pearl oyster banks in such a manner as to aim at ensuring a constant supply of mature oysters. He should search at each inspection for new spat and for fresh beds of young oysters, should locate the oysters of different ages, transplant them when necessary, thin them out when overcrowded, remove young which would necessarily be killed during the fishing of the old, or would prevent their neighbours' growth; and thus he would arrange to have all the paars occupied by stocks, some in one and some in another stage of growth, and to bring on a succession of adults ready for fishing.

12. That during the time of the monsoons when it would be impossible to work in the Gulf of Mannar, the Marine Biologist should carry on his investigations at the Galle Laboratory. There would be plenty in connection with the life and growth of the pearl oyster and the formation and abundance of pearls to occupy his attention, even if he had no other work.

But, as secondary duties when not fully occupied with pearl oyster questions, I would recommend that the Marine Biologist should be instructed to investigate the "window-shell" oyster fishery at Tampalakam, the pearl oyster at Trincomalee and elsewhere on the east coast, the edible oyster at various localities, the Trepang fishery, Chank diving, the possibility of establishing a commercial sponge fishery at Trincomalee, and the native fish-trawling industries. With these and

* On 4th February, 1902, on the Periya Paar, in 15 minutes one dredge brought up 14,912 young pearl oysters.

other practical applications of Science, which he would discover and make known, the time and energies of the Marine Biologist would be more than fully occupied throughout the year in useful work for the Colony.

13. If these recommendations are adopted and a Marine Biologist is permanently charged with the work of conserving and promoting the pearl oyster and other fisheries, he must be given the means of carrying on his work satisfactorily. For inspecting, dredging, "culching," and transplanting a steamer is necessary. It need not be large nor swift, but it must be fit for the work and specially fitted with the tanks, winch, dredges, &c., which will be necessary. He also will require a laboratory, and the usual mechanical and clerical assistance; but I do not see that any useful purpose can be served, under the circumstances, by establishing a laboratory at Aripu or elsewhere in the Gulf of Mannar. It must be clear to any scientific man who knows the locality that any biological work on the pearl banks must be done at sea from a ship during the inspections and fisheries, and cannot be done at all during the monsoons because of the heavy sea and useless exposed shore. At these latter times the necessary laboratory work, supplementing the previous observations at sea, could be done much better at Galle than at Aripu or Mannar.

14. Consequently, I recommend that the Marine Laboratory at Galle be regarded as the headquarters of the Marine Biologist's work, and that, in the interests both of the various fishing industries and also of scientific investigation in general, that institution be established at once on a permanent basis with a suitable equipment. The building ought, moreover, to be of sufficient size to accommodate two or three additional zoologists, such as members of the staff of the Museum and of the Medical College at Colombo, or scientific visitors from Europe. The work of such men would help in the investigation of the marine fauna and in the elucidation of practical problems, and the laboratory would soon become a credit and an attraction to the Colony. Such an institution at Galle would be known throughout the scientific world, and would be visited by advanced students of Science, and it might reasonably be hoped that in time it would perform for the marine biology and the fishing industries of Ceylon very much the same important functions as those fulfilled by the celebrated Gardens and Laboratory at Peradeniya for the botany and associated economic problems of the land.

I have, &c.,

W. A. HERDMAN.

University, Liverpool,
September 16, 1903.

II.—1904.

THE GOVERNMENT DAIRY.

REPORT of the COMMITTEE appointed to inquire and report on the Breed, Feeding, and Treatment of the Cows at the Government Dairy Farm, and to make suggestions as to the improvement of the quality of the Milk.

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 45 cents.

1904.

CONTENTS.

	PAGE
Section I.—Introduction	1
Section II.—The Breed of the Cattle	3
Section III.—The Feeding of the Cattle	5
Section IV.—The Treatment of the Cattle	17
Section V.—The Milk	20
Section VI.—Conclusions	30
Section VII.—Summary	31
Dissent	31

REPORT OF THE DAIRY COMMITTEE.

SECTION I.—INTRODUCTION.

(*a*) *Brief History.*

THE Dairy was apparently started in 1893, and consisted of 47 head of cattle, viz., 21 Sind cows, 5 Sinhalese cows, and 21 Coast cows.

The land upon which these cattle were originally fed consisted of two portions: (1) land round the Dairy; (2) land round the Model Farm.

1. *Land round the Dairy.*—This originally consisted of 44 acres, but 4 acres were attached to the Racecourse and 4 more acres were sold, so that now there are only 36 acres.

2. *Land round the Model Farm.*—This consisted of 222 acres.

In addition to these two estates, in 1896 the Havelock Racecourse was rented from the Ceylon Turf Club as grazing ground, about 80 acres being available.

(*b*) *The Present Condition.*

1. *Land.*—The Dairy therefore has now three available grounds, viz., the land around the Dairy, the Model Farm, and the Racecourse; of these, the Model Farm is hardly used at all. In reality there are two separate institutions: (1) the Dairy and the Racecourse; (2) the Model Farm. We shall, therefore, at present confine our attention to the Dairy.

2. *The Staff.*—The Dairy is looked after by a staff consisting of—

Resident Manager, paid Rs. 1,200 per annum and a house.
One overseer messenger
Three milking coolies
Nine working Dairy coolies
} paid Rs. 1,684 per annum.
Sixteen grass land coolies, paid Rs. 1,782 per annum.

3. *Buildings.*—The buildings of the Dairy consist of—

(*a*) One large shed 120 ft. in length, 50 ft. in breadth.
(*b*) One square shed 50 ft. square, used for grown-up calves.
(*c*) Two outside lean-to sheds: one 100 ft. long and 10 ft. wide, one 40 ft. long and 10 ft. wide. These are used for cows.
(*d*) One quarantine shed. This is situate in grass land about 150 yards from the Dairy, is 50 ft. square, and is capable of holding 30 head of cattle. All these buildings are of an inexpensive nature.

4. *Cattle.*—The buildings house 203 head of cattle, which may be classified into—

(*a*) 103 cows ...	Sind		87
	Australian		2
	Crossbred :—		
	Australian Sind		3
	Durham coast		2
	Australian coast		1
	Nellore		8
(*b*) 5 bulls ...	Stud		3*
	Draught		2†
(*c*) 95 calves ...	Sucking		56
	Over one year		39
			203

* Australian, Young Australian, Sind. † Native Sinhalese.

Of these, 26 were sold on the 17th August last. These animals are fed upon grass and artificial food.

The diet table is as follows :—

Diet Table.

Cows.	Poonac.	Cotton Seed.	Bovinia.	Total Ration.	Water given.	Green Fodder, Mauritius Grass.
	lb.	lb.	lb.	lb.		lb.
1 to 4 months after calving ...	6	2	2	10	With food and after, if desired	about 50
4 to 6 do.	5	2	2	9	do.	do.
6 to 8 do.	4	1	2	7	do.	do.
Dry cows	1 to 1½	—	—	1	do.	do.

Calves (sucking): milk, weak poonac and bovinia, ulundu (boiled). Bulls: grass, weak poonac, bovinia, and cotton seed.

The cows are milked twice a day, at 4 A.M. to 5 A.M. and 1 P.M. to 2 P.M.

All cattle graze and exercise on the Racecourse, the dry cows all day and the milch cows between 2 to 5 P.M. In the morning the milch cows graze in the Dairy compound.

5. *Milk.*—The analyses of dairy milk which we have been able to find, apart from those which we have made, are by no means numerous. The most recent given in the "Agricultural Magazine," vol. XII., page 2, is as follows:—

Dairy Milk (Cochran).

June 6, 1900.

Specific gravity, 1,030.	Per cent.
Water	86·85
Solids	13·15
	100·00
Solids.	
Proteids and lactose*	8·31
Salts†	·72
Solids, not fat	9·03
Fat	4·12
Total solids	13·15

* In all these analyses proteids mean the casein and the albumen, and the lactose means milk sugar.
† Salts mean ash.

An analysis in October, 1894, by Mr. Cochran, late City Analyst, as given in the "Agricultural Magazine," vol. VI., page 41, is as follows:—

Specific gravity, 1,028.	Per cent.
Water	83·14
Solids	16·86
	100·00
Solids.	
Proteids not lactose	8·92
Salts	·72
Solids, not fat	9·64
Fat	7·22
Total solids	16·86

Mr. Cochran remarks upon this sample that it is considerably richer than average English milk.

The average of Mr. Cochran's two analyses would be as follows:—

Specific gravity, 1,029·5.	Per cent.
Water	84·99
Solids	15·01
	100·00
Solids.	
Proteids and lactose	8·66
Salts	·72
Solids, not fat	9·64
Fat	5·67
Total solids	15·01

With regard to these two analyses, that in 1900 seems to resemble average Indian Sind cow milk, as the attached table shows:—

Nature of Analysis.	Government Dairy Milk, 1900.	Average Indian Milk.
Water	86·85	86·13
Total solids	13·15	13·87
Proteids and lactose	8·31	8·37
Salts	·72	·70
Solids not fat	9·03	9·07
Fat	4·12	4·80

but the second analysis in 1894 is so remarkable that it needs special consideration. Jersey and Guernsey cows are supposed to be among the richest milk producers in the world, and though, according to Mr. Mollison, the Indian cow yields milk which is generally superior to average European milk in quality, though not in quantity, yet it is inferior to the milk of the Channel Island cows.

Comparing the 1894 analysis with the analysis of Jersey and Guernsey cows, the result is as follows:—

Nature of Analysis.	Government Dairy Milk, 1894.	Jersey.	Guernsey.
Total solids	16·86	14·65	14·23
Fat	7·22	5·02	4·90

The Jersey and Guernsey milk analysis is that given in connection with the London Dairy Show (1888–89).

In other words, the analysis of 1894 is very much superior to the best European milk. The only explanation which we can offer is that perhaps the milk of 1894 was the strippings, *i.e.*, the milk which comes at the very end of milking, taken from a single very good cow. The strippings are well known to be superior to the average milk of a cow.

A most remarkable analysis of an individual cow's milk from the Government Dairy is given in the "Agricultural Magazine," vol. X., page 43, when the milk of a cow called "Queenie" was analyzed by Mr. Cochran, the City Analyst, and was found to give 8·92 per cent. of fat. Kirchner gives the limits of the variation of fat in cow's milk as from 0·8 to 8·0 per cent.

6. *Finances.*—With regard to the financial position of the Dairy, the nett profits in 1901 were Rs. 6,000 roughly, and as the value of the land is estimated at an average of Rs. 8,000 per acre, for 36 available acres, *i.e.*, about Rs. 300,000, the percentage of profit is about 2 per cent. on the present value of the land. But this does not represent the only profit of the Dairy, for it has paid off all sums of money spent upon it by the Government, and therefore has now in cattle, buildings, &c., assets to the value of nearly Rs. 38,000. Thus it is seen that financially the Dairy is a success, as far as the Government is concerned.

SECTION II.—THE BREED OF THE CATTLE.

The breed of the cattle will be considered under two heads :—

(*a*) The Pure Breeds.
(*b*) The Cross Breeds.

(*a*) *The Pure Breeds.*—The native Sinhalese cow, though the quality of its milk is good, does not provide a sufficient quantity of milk to make it useful as a dairy animal. Consequently, in starting the Government Dairy, it was necessary to import cattle which could yield a large quantity of good milk. The possible sources of cattle which have been tried are :—

(1) European cattle.
(2) Australian cattle.
(3) Indian cattle.
(4) Aden cattle.

(1) and (2) *European* and *Australian Cattle.*—European and Australian cattle are derived from *Bos Taurus*, and may be classified together. They have both been tried at the Dairy, and the evidence at our disposal shows that they suffered markedly from the heat, and that they do not thrive in the low countries and Colombo, and are therefore useless.

(3) *Indian Cattle.*—These are the humped cattle, *Bos Indicus.* When the Government Dairy was started, Indian cattle were used because they do very well in the low countries and Colombo, and do not suffer markedly from the heat.

The advice of Mr. Mollison, now Director of Agriculture for India, was sought, and at his instance the cattle of the Bombay Presidency were used in preference to any other breeds.

In the Bombay Presidency the most important breeds appear to be :—

(1) The Gir cattle.
(2) The Gujarati cattle.
(3) The Nellore cattle.
(4) The Lower Sind cattle.

Of these, the Lower Sind cattle were chosen, and have been found to be satisfactory.

The Gir cattle are said to produce more milk, and are said to yield up to 24 lb. of milk per diem, *i.e.*, 20 pints, but they do not remain long in milk, and it is stated that 12 to 16 lb. is more nearly the average daily quantity. Moreover, they are said to be dangerous cattle to keep, attacking strangers, and on all these grounds are not used at the Dairy.

The Gujarati cattle are said to be good milkers, but not so satisfactory as the Sind.

The Nellore cattle are more valuable for draught work than for milk, and they are delicate and require to be carefully brought up.

The Sind cattle are very peaceable, and yield a good quantity of milk. They come from the neighbourhood of Karachi, and are the cattle with which the Government Dairy is principally stocked, viz., 87 out of a total of 103 cows.

The Sind cows are said to be specially bred with a view to milk production. Thus it is said that the bull-calves from the best milking cows are specially reared for purposes of service, and that around Karachi owners are careful that their milch cows are only served by such specially reared bulls. This of course is of great importance, as breeding for milk production is as important as breeding for any other purpose. The cows thus produced are good milkers. In their native country they are said to produce 30 lb. of milk per diem, to remain long in milk, and to breed regularly.

Imported into other parts of India, they are said to be liable to suffer from inflammation of the udder, but this has not been found to be the case in Ceylon, where only about 1 per cent. suffer in this way, and then it is principally due to one animal treading upon another and thus causing the inflammation. The Sind cattle are said to be a pure breed.

These Sind cattle are purchased in India either by a representative of the Ceylon Government who goes there specially or by a Government Veterinary Officer of Bombay. When indented for, the indent is as follows: Young Sind cows, with second or third calf, either in calf and near calving, or with calf at foot, and not more than one month old. Reds for preference.

(4) *The Aden Cattle.*—These cattle come from the Hinterland of Aden. The cows are said to breed when young (eighteen months), to breed regularly every year, and the calves in their own native place are only allowed to suckle for a month. They yield about 18 lb. of milk per diem, *i.e.*, 14½ pints, and milk well. They are quiet animals. They can easily be fed upon artificial foods, such as cotton seed, poonac, and grain, the daily ration being 8 lb., which is rather less than that given in the Government Dairy to Sind cattle. These cattle seem to resemble Sinhalese cattle.

The main difficulty about Aden cattle is to obtain them, but since the recent developments in the Aden Hinterland this may be lessened, as it is about eight years ago since the last attempt was made to get these cattle for Ceylon, and they are able to be obtained for India. The great difference between the Aden and Sinhalese cow is that the Aden cow is a good milker and the Sinhalese cow is a poor milker.

In India, Aden cows yield 22 lb. of milk per diem, about 17½ pints, and this is said not to be affected by changes of weather, irregularity of feeding, milking, or, in other words, the cow can stand a certain amount of mismanagement. Moreover, they require less rations than other Indian cattle. They are said to be very susceptible to rinderpest.

(*b*) *The Cross Breeds.*—Cross breeding has been tried at the Government Dairy, and the following crosses have been produced :—

Three cows from crossing of an Australian bull and a Sind cow.
Two cows from crossing of a Durham bull and a Coast cow.
One cow from crossing of an Australian bull and a Coast cow.

These are therefore crosses of purely imported cattle. The crossing of Sinhalese with Sind cattle has been tried in the Dairy, and the result was a cow which gave half the quantity of milk which a pure Sind cow would have given. We have also seen the results of crossing purely imported animals in Mr. De Soysa's Bagatelle Dairy, and we have had the valuable experience of the Maha Mudaliyar on this point. The crosses are generally fine brindled cattle, and the evidence is that the milk is improved in quantity. This has been investigated, and the following table shows the analysis of milk from the Durham-Coast cross and from the Australian-Sind cross, and sets forth a comparison with the average Dairy bulk milk :—

Table of Cross Breed Milk.

Nature of Analysis.	Durham-Coast. (Committee.)	Australia-Sind. (Committee.)	Average Dairy Bulk Milk. (Committee.)
Corrected specific gravity	1030·60	1028·60	1026·90
Cream	5 per cent.	6 per cent.	7 per cent.
Water	89·07	87·59	88·055
Solids	10·93	12·41	11·945
Caseinogen	4·63	4·54	4·083
Albumen	·54	·45	
Lactose	3·87	4·00	4·095
Salts	·63	·67	·610
Solids, not fat	9·67	9·66	8·788
Fat	1·46	2·73	3·157
Quantity in pints	11·00	10·50	6·000

It will thus be seen that the Australian-Sind cross is better than the Durham-Coast cross, and that it is not unlike bulk milk, but contains less fat. Of course it is hardly fair to compare it with the bulk as its milk must vary with the age of its calf, though it is convenient.

It would be expected that the Coast strain in the Durham-Coast would be not as good as the Sind strain in the Australian-Sind, and that is so, because the cow from the best milking line (Sind) is the most impressive.

The Maha Mudaliyar obtained in his own cattle-breeding establishment highly satisfactory crosses, both as milkers and draught cattle, by crosses between an English Hereford bull and Coast cow, one such cross giving him eighteen bottles of milk, *i.e.*, 21 pints of milk per diem. He also obtained excellent crosses from the Hereford bull and Nellore cows.

Crossing of European and Indian cattle must be looked upon as a violent proceeding. With regard to other crosses, we can get no evidence with regard to Aden bulls, though there has been one in the dairy ; it died of rinderpest before any experience was obtained. Nellore crosses are supposed to improve the strength and the milk of the cow.

Coast bulls have been tried with Sinhalese cattle, but not in the Dairy. The result is that the crosses are either blue roans or white and black spotted cattle. The immediate result of crossing is said to be an improvement upon the Sinhalese cattle as regards milk. The quantity rises to about six bottles (about 7 pints), while the Sinhalese cow only produces two to four bottles, 2⅓ to 4⅔ pints ; but it is not an improvement upon Coast cows, which produce eight bottles (about 9½ pints).

The crossing of Sind and Sinhalese cattle results in a cross which is a worse producer of milk than Sind, though better than pure Sinhalese. This cross produces four bottles, that is 4⅘ pints. There is no system of cross breeding in Ceylon, and Sinhalese cattle themselves are said by authorities to be all close bred, therefore we are not in a position to state what the result of systematic crossing would be, but the evidence at our disposal tends to show that in course of time the cross would degenerate down to the level of the Sinhalese cow, because the local pasture is poor.

Another question with regard to crossing is the financial aspect of the subject. With regard to this, it is calculated that the cost of rearing a calf in the Government Dairy from the time it ceases to suck to the birth of its first calf is about Rs. 300, whereas it only costs Rs. 150 to land a Sind cow in Colombo at its second or third calf ; consequently it is cheaper to import and keep on importing cattle than to try to rear a breed in the Government Dairy because there is not sufficient good pasture.

Another point is the cost of a stud bull. The initial cost is heavy and the cost of upkeep considerable, and the effect of climate detrimental. Moreover, the experiments which have succeeded have been with the imported bulls serving imported cows, and the resultant cross is an animal which is practically an import. The evidence at our disposal is that these crosses all have a tendency to deteriorate, unless they are specially fed in the same manner as the imported Sind cows, *i.e.*, if treated as ordinary Sinhalese cattle they will deteriorate by the third or fourth generation to the standard of Sinhalese cattle.

The question appears to resolve itself into an inquiry as to why the Sinhalese cattle are such bad milkers, and the answer seems to be that the root of the evil is the poor quality of the soil, and hence of the fodder, which in generations would of course stamp itself upon the breed, and in the absence of any attempt to rear milk-producing animals by the villagers, who only wish good draught or trotting bulls, as the cocoanut milk has taken the place of cow milk. As evidence of this, we adduce the improvement of native cattle on the better fodder of the North-Central Province. This same food difficulty in our opinion would tend to deteriorate any cross unless artificially fed, which is expensive.

Conclusions.—From the above the following conclusions are drawn :—

(1) That Aden cattle, if they can be procured at a reasonable price—they are said to cost from Rs. 40 to Rs. 70 each, initial cost—should be tried and compared with Sind cows of same age, time of calf, &c., and a report submitted as to whether they are or are not more suitable for the low country of Ceylon than the Indian cattle. As to carriage from Aden to Ceylon, it may prove to be expensive, but probably not more than bringing Sind cows from Karachi.

(2) Of the Indian cattle, the Sind breed seems to be the best and most suitable for the low-country of Ceylon and Colombo.

(3) It seems to us that an attempt should be made to improve Sinhalese cattle, not by crossing, but by better feeding, careful selection of good cows and good bulls, and seeing that these good cows are served by good bulls, and from their progeny selecting the best bulls and cows.

"In-breeding" in the scientific meaning of the term should not be allowed. Long years ago, in the seventeenth century, the Sinhalese cows gave sufficient milk to allow the native to churn this milk into butter. It is possible that the development of the cocoanut industry has led to the neglect of the milch cow, because the cocoanut would produce more easily and cheaply a milk which would be as useful to the native for his curries, &c., and the land, which was hitherto used for pasture, is now converted into cocoanut estates, and the grasses growing under these trees, now naturally of a poorer quality, are still used to feed the native cattle.

(4) That crossing is too expensive for Dairy purposes, and that it is cheaper to import cattle than to try to raise a cross breed.

SECTION III.—THE FEEDING OF THE CATTLE.

The feeding of the cattle may be considered under two heads ; A, The Foods ; B, The Ration.

A.—*The Foods.*—The sources of food for the Dairy cattle are four in number :—

(*a*) Grass.	(*c*) Salt.
(*b*) Concentrated foods.	(*d*) Water.

(*a*) *The Grass.*

The Localities.—The grass which is obtainable comes from three sources :—

(1) The Dairy Farm.
(2) The Havelock Racecourse.
(3) The Model Farm.

(1) *The Dairy Farm.*—This is about 36 acres in extent, and of this about 20 acres are cultivated for Mauritius grass. This grass is manured from the dung of the dairy, and is cut for the cows to eat. The soil of the dairy is really cinnamon sand, and the land in places is not low-lying, and therefore not very suitable for Mauritius grass to grow. The lower lying grounds, which have been well manured for ten years, are better. The manuring by means of the cowdung and horse manure is good. The Mauritius grass grown on this plot is nearly but not quite enough for the dairy. In times of drought, however, it would be insufficient.

(2) *The Havelock Racecourse.*—The Havelock racecoure is about 80 acres in extent, and the centre of it affords means of exercising and in a way grazing to the cattle of the Dairy.

The soil of this part of the racecourse is very poor, being practically cinnamon sand, which has been somewhat improved by decaying vegetation and cattle droppings during the last ten years. It can hardly be said to be of much use as a grazing land.

The following is the report on its grasses specially prepared by Mr. Carruthers, Assistant Director of the Royal Botanical Gardens at Peradeniya, for this report :—

Colombo Dairy Farm Pasture.

At the request of the Dairy Committee I visited the Dairy Farm and pastures on September 14 and examined the racecourse from a feeding value point of view. The soil is practically pure sand, with almost an absence of humus. The herbage is very mixed ; nearly all the plants are stunted and growing much less vigorously than they would do even on poor soil. The feeding value either for milking purposes or beef is almost nil, and I should imagine that the gentle exercise the animals get in search of food has more effect on them than the food they obtain.

Very few plants seems to have risen from seed recently ; most of the grasses and other plants have spread vegetatively, *i.e.*, by means of running stems or spreading roots. The poorness of the soil offers little chance for seedlings to grow successfully. This gives a patchiness to the character of herbage. Most of the common plants in the field are not of good feeding value, but the following are the grasses and other plants that form the food in the pasture :—

Ischæmum aristatum, L., gives probably the most food of any plant in the pasture, and is consequently the most eaten. I observed more signs of this grass being nibbled than in the case of any other. The comparative absence of flourishing heads of this plant also shows that it is eaten down.

The grass *Eragrostis stenophylla*, Hochst., is next in point of view of abundance, but is not sufficiently leafy to give much food. Another grass of the same family, *Eragrostis amabilis*, Wright, is fairly abundant ; it is a very small plant, giving hardly any food, and is not eaten much, if at all. Its flowering stalks are common over the whole area.

Panicum repens, L., "Etora" of the Sinhalese, is a valuable food grass, and though it is not common in the field, it gives a good bite, and is eaten down whenever it occurs.

Paspalum Longiflorum, Retz., a very small leaved and diminutive grass, is one of the most abundant, but even when growing luxuriantly it has no feeding value, as it grows only about 8 inches high, and in the racecourse it is dwarfed to a smaller height than this.

An *Anthistiria*—the species of which I have not yet had time to examine—probably a dwarfed form of *Anthistiria tremula*, Nees, the Sinhalese "pinibarutana," gives a certain amount of food, and for its size is of higher value in the pasture than most of the grasses.

Eremochloa zeylanica, Hochst., is fairly abundant, but has little, if any, nutritive value.

Andropogon aciculatus, Retz., "tuttari" of Sinhalese, is a good feeding grass, but in the racecourse field forms less than 5 per cent. of the whole, so cannot be said to take much part in the pasture.

Perotis latifolia, Ait., the grass with a bottle brush-like flower of a metallic hue, is fairly common, but gives no food and is rarely eaten.

Of the plants other than grasses, the most important from a feeding point of view is *Desmodium triflorum*, D. C., the "hin-undu-piyali" of Sinhalese, but in the field in question, owing to the poorness of the soil, this plant, which has a creeping habit, seldom gets more than ½ an inch high, and consequently does not afford a "bite." I could not find signs of its being eaten.

The sedgy plants belonging to the families *Cyperus* and *Fimbristylis* are abundant, especially in the damper parts, forming about 20 to 25 per cent. of the herbage on the whole pasture. I noticed that these had been pretty generally eaten, and this fact is alone a sign of the poverty of the pasture, as these are as a rule the last to be eaten by stock.

The herbage on the racecourse proper is considerably better than that in the centre. This is due to the fact that road scrapings are applied, and also that weeding goes on. One plant, however, of good feeding value, a grass, *Cynodon dactylon*, Nees, is treated as a weed owing to the tufted habit it possesses, which makes it unsuitable when a flat turf is required.

I observed in several places that the dung of the cattle, instead of being of help to the plants of the pasture, was carried off by ants.

It seems to me that it is hardly possible to find a site with less advantages for a Dairy Farm, the only point in favour being its proximity to the consumer.

The soil both on the farm and racecourse pasture gives no help to the feeding of the stock, and is little more than a mechanical holder for the manure and water which nourish the Mauritius grass, *Panicum muticum*, Forsk, on which the cattle are fed. Excellent crops of this are produced at the farm, some six or eight in the year. From an economic point of view, the land, which probably has some value from its situation, is wasted as dairy pasture.

I append a list of the plants growing on the racecourse enclosure with an approximate estimate of the relative abundance of those forming the bulk of the herbage. Those in *italics* have a feeding value, though not necessarily at all of a high order.

The whole question of the relative values of forage plants in the low-country is one upon which our knowledge is of the scantiest, and would well repay experiment and investigation. Experiments with a view to determining the most profitable food plants for stock could be carried out on the Government Dairy Farm without any appreciable loss in the return the land gives in milk or beef.

It is probable that an inspection at another time of year would give a different estimate of the relative percentages. I have found in judging the relative quantities of the plants forming celebrated pastures in England (an inquiry into which I took part in) that at different times the more vigorous growth of some grasses and other plants makes them bulk larger to the eye than at other times.

Cyperus stolonifera, Retz. 8 per cent. sedge.
Desmodium triflorum, D.C. 8 per cent. "Hin-undu-piyali," S.
Cyperus castaneus. 7 per cent. sedge.
**Ischæmum aristatum*, L. 7 per cent.
**Eragrostis stenophylla*, Hochst. 7 per cent.
**Paspalum longiflorum*, Retz. 6 per cent.
**Eragrostis amabilis*, Wright. 5 per cent.
Fimbristylis nigrobrunnea, Thud. 5 per cent. sedge.
Fimbristylis monticola, Steud. 5 per cent. sedge.
**Andropogon aciculatus*, Retz. 4 per cent. "Tuttari," S.
Fimbristylis acumuriata, Vahl. 3 per cent. sedge.
**Eremochloa zeylanica*, Hochst. 3 per cent.
**Anthistiria*, sp. 3 per cent.
**Perotis latifolia*, Ait. 3 per cent.
Xyris anceps, Lam. 3 per cent.
**Panicum repens*, L. 3 per cent. "Etora," S.
**Panicum indicum*, L. 2 per cent.

The other plants, forming about 20 per cent. of the herbage, occur in too small quantities to be estimated. They are:—

**Paspalum scrobiculatum*, L.
**Ischæmum ciliare*, Retz. "Rat-tana," S.
**Eleusine ægyptiaca*, Desp.
**Eleusine indica*, Gasit.
**Eragrostos tenella*, var. *Viscosa*, Stapf.
Wrightia zeylanica, Br. "Sudu-idda" or "Wal-idda," S.
Commelina nudiflora, L. "Girapala," S.
Mollugo disticha, Sa.
Vernonia cinerea, Less. "Monara-kudimbiya," S.; "Chilivyarchenkainia," T.
Emilia sondifolia, D.C. "Kadupara," S.
Pedalium murex, L. "Ekhefenehi," S.
Aneilema vaginatum, Br.
Crotolaria striata, D.C. This is a valuable forage plant of the order Leguminosæ, and enriches the soil by its nitrogen forming nodules on the roots. I saw these in fairly large numbers on the few plants in the field.
Genosporum prostratum, Benth.

Genoisporum prostratum, var. *gracile*, Thud.
Bonnaya tennifolia, Spreng.
Spennacoce hispida, L. "Hingetacola," S.; "Nattaichuri," T.
Adenosina capitatum, Benth. "Nit-gonakola," S.
Vandellia cristacea, Benth.
Drosera buimannii, Vahl. "Wattaressa," S. This sundew was growing in places where only white silver sand was to be seen.
Polycarpæa corymbosa, Line.
Centrathera numifusa, Wall.
Scoparia dulcis, L. A tropical American plant common by roadsides in the south of the Island, noticed first by Ferguson in 1871.
Mimosa pudica, L. The sensitive plant (also introduced) occurs at the edges of the field, but does not spread over any distance. It grows freely in the surrounding ditches and hedgerows, and runs in from there.

This list is not absolutely exhaustive; it was made after only a visit of a few hours, and it is probable that some plants which do not occur commonly, and were not in flower at the time of my inspection, may have escaped my notice. The plants marked with an asterisk are grasses.

(3) *The Model Farm.*—This farm should consist of 222 acres, but 80 acres are golf links, 11 acres are leased to Messrs. Davies & Co., 50 acres are leased by the Dairy as grass lands, half an acre is laid out with a small stock of pineapples, peppers, radishes, &c., 50 acres are marsh. The remainder, by no means excellent-looking land, is nibbled at by a few sheep and Sinhalese cattle, while the neighbouring cattle trespass upon it almost at will. It is situate about 1½ mile from the Dairy, and was intended for grazing and exercising dry cows because of the barren condition of the Dairy, and because at that time no racecourse was available; but it is only used now for experimental purposes.

It appears to us to be useless to the Dairy for feeding purposes, as the grass grown upon it has to be bought from the lessees, which was last done in 1901. It is not useful for purposes of quarantine, as the land round the Dairy would be used, and would be with a little addition sufficient for quarantine purposes.

2. *The Soil.*—Before entering into the different kinds of grasses, it is necessary to inquire into the soil upon which the grass is grown. The Model Farm need not concern us, and as the Dairy and the Racecourse join one another we have simply investigated the worst and the best soil on the Dairy, and we consider that the soil of the Racecourse will be found, if analyzed, to be a little but not much better than the worst soil of the Dairy. Economy alone prevented us having the Racecourse soil analyzed.

The soil of the Dairy is divided into two parts:—

(1) A white sand with little retentive power for moisture or manurial constituents, situate on the higher parts of the Dairy.
(2) A gray black sandy soil, darker when moist, and in a finer state of division than (1), more hygroscopic and retentive, due to the larger amount of organic matter, situate on the lower parts of the Dairy estate.

The analysis of these soils by Mr. Kelway Bamber is as follows:—

Soil No. 1.

Mechanical Composition.	Per cent.
Sand and roots, &c., above 30 mesh sieve	36·0
Sand passing 30 sieve	30·0
Do. 60 sieve	33·0
Do. 90 sieve	1·0
	100·0
Retentive power for water dried in the sun	0·50
Retentive power when well drained	10 00

Chemical Composition.	
Moisture	0·500
Organic matter and combined water	1·260
Oxide of iron	·120
Alumina	·318
Manganese	trace
Lime	·130
Magnesia	·079
Potash	·025
Soda	·116
Phosphoric acid	·019
Sulphuric acid	·030
Chlorine	·0003
Sand and silicates	97·400
Nitrogen	·087
Nitrates	trace

Soil No. 2.

Mechanical Composition.	
Sand and roots, &c., above 30 mesh sieve	18·0
Sand passing 30 sieve	32·0
Do. 60 sieve	42·0
Do. 90 sieve	8·0
	100·0
Retentive power for water dried in the sun	6·00
Do. when well drained	27·50

Chemical Composition.

	Per cent.
Moisture	6·000
Organic matter and combined water	6·200
Oxide of iron	·960
Alumina	2·219
Manganese	trace
Lime	·640
Magnesia	·115
Potash	·061
Soda	·178
Phosphoric acid	·105
Sulphuric acid	·108
Chlorine	·004
Sand and silicates	83·400
Nitrogen	·386
Nitrates	·004

Mr. Bamber remarks that the above figures show that No. 2 soil has greatly improved by cultivation and manuring, as the sandy portion of the soils show they were evidently originally the same. It would be hardly possible to bring No. 1 soil into the same condition as No. 2 by the use of artificial manures alone, as humus is the constituent chiefly required to improve the physical properties. The growth and burial of leguminous plants, such as the "crotalaria striata," which grows so well in the neighbourhood, would improve such a soil, and if the organic matter or humus was supplied by this means, artificial manures could well be employed to supply the necessary phosphoric acid and potash, in which constituents No. 1 is markedly deficient. The retentive power for water of both soils is low: a sandy soil will retain 7 per cent., a clay soil 35 per cent., and forest soil 42 per cent. of water. The first soil is very deficient in nitrogen, but the second is better. No. 2 is deficient in the necessary potash and phosphoric acid. There is no doubt that the constant manuring of soil No. 2 with horse dung and dairy manure has done great good. The horse dung rapidly ferments, and is a very rich manure.

The Dairy manure consists of—

(*a*) Liquid: urine and soluble parts of the dung.
(*b*) Dung. This contains a quantity of oily matter from the poonac.
(*c*) Litter, remains of the stalks of the Mauritius grass.

The liquid manure of the Dairy was intended to be collected in a tank along with the washings of the shed (for it is necessary to dilute this manure with water) and then to be pumped on to the land, but unfortunately the pump is not adequate to do this in a reasonable time. In fact we are of the opinion that it is entirely due to the manure that the Mauritius grass grows as well as it does on No. 2 soil.

Mr. Bamber is of opinion that No. 2 soil could be improved by manuring it with phosphates and potash, in addition to the horse dung and Dairy manure at present used.

The kinds of Grass.—There are a large number of different kinds of grass to be found in Ceylon pastures, and of these the more important for our present purpose are :—

(1) Mauritius grass.
(2) Guinea grass.
(3) Common creeping grass.
(4) Couch grass, "Etora."
(5) Belatana.
(7) Dhoob grass, "Arugampillu."
(8) The Undupiyales.
(9) Elephant grass, "Et-tana."

(1) *Mauritius Grass.*—This grass, which is supposed to be a native of Sumatra, is an import into Ceylon, and now grows extensively in swampy and low grounds. It is called water grass, or in Sinhalese "diyatanakola," because it is supposed to absorb water readily, and that this is so is shown by the following analyses :—

Dry Weather.
August, 1903 (Committee).

	Per cent.
Water	75·20
Solids	24·80
	100·00

After a small amount of Rain.
August, 1903 (Committee).

	Per cent.
Water	82·00
Solids	18·00
	100·00

In other words, a certain amount of rain made a difference of 7 per cent. in the contained water. Its botanical name is *Panicum muticum.* The general opinion is that it is the best and cheapest available fodder for cattle in the low countries of Ceylon. One acre is said to yield sufficient fodder for five head of full-grown cattle for one year. It gives a crop on an average every six weeks in the wet season, and at slightly longer intervals in the dry season. It is cut near the ground, and when young the cattle will eat every portion of it, but if cut old there is a considerable waste.

With other food it is calculated that a full-grown cow will require 50 lb. weight of green Mauritius per diem, but with reference to this more will be said under the head of the Ration.

The analysis of the grass grown on the Dairy is as follows :—

(Committee.)

	Per cent.
Water	75·20
Solids	24·80
	100·00

Solids.

	Per cent.
Solids, not fat or salts ...	21·92
Fat	·80
Salts	2·08
	24·80

A more complete analysis of the solids in the Dairy grass by Mr. Kelway Bamber is as follows :—

	Solids in 100 Parts.		On Dry Grass.	
	Per cent.		Per cent.	
Fat (ether extract)	3·50	*i.e.*,	·868	
Proteids	6·12	*i.e.*	1·517	
Carbohydrates	58·31	*i.e.*	14·462	
Fibre	27·00	*i.e.*	6·596	
Salts	5·07	*i.e.*	1·267	
	100·00		24·710	

Nutritive ratio 1 to 10·8, which is high.

Mr. Kelway Bamber also found that if dried in the air till it became hay it contained 55 per cent. of water.

The ash consists of—

	Per cent.
Soluble ash	3·93
Insoluble ash	1·14

It is poor in phosphates and lime.

It can also be compared with the analysis of the mixed pasture grasses of America, which are supposed to have high feeding properties :—

	Per cent.
Water	80·00
Solids	20·00
	100·00
Solids.	
Fat	·80
Proteids	3·50
Carbohydrates	9·70
Fibre	4·00
Salts	2·00
	20·00

Nutritive ratio 1 to 3·2.

It is seen to be deficient in proteids. There is no doubt that this grass absorbs a great deal of moisture in the wet weather, and this affects the quantity of milk.

Thus, in the month of February, 1902, the average quantity of milk per cow was $6\frac{16}{89}$ pints, while in the month of November, 1902, the quantity was $8\frac{7}{9}$ pints. An important question with regard to this grass is whether it can be preserved in any way.

In India grass is preserved by either—

(1) Ensilage.
(2) Hay-making.

(1) *Ensilage.*—This may be said to have never been properly tried in Ceylon. There seems to be a great objection to it, and it is said to be useless; because (*a*) it is expensive ; (*b*) there is generally a continuous supply of green fodder. We are of opinion that it is not required in Ceylon.

(2) *Hay-making.*—The most conflicting evidence has been given upon this important point. We have been told that it has been tried and has failed, and that it has been tried and really good hay has been made.

Hay is made in India, and if sufficient proper grass can be grown there ought to be no difficulty in making it in Ceylon.

We feel that hay is important for these Sind cattle, as they are apparently fed upon hay in certain seasons of the year in India, and Mr. Mollison gives them hay in the Poona Dairy.

There is no doubt in our own minds that the milk of the Sind cows in the Dairy of Colombo is not as good as that in the Dairy in Poona, and we are inclined to lay the blame upon the food, and particularly upon the fact that the food is so watery, and we feel that, if possible, hay should be given to the cattle.

We think that experiments upon this subject should be made with the view of finding whether Indian or other grasses will grow profitably in Ceylon and will or will not produce hay, and the relative cost be considered between the locally produced and the imported hay.

(2) *Guinea Grass.*—This grass is said to have been introduced into Ceylon from the coast of Guinea by Mr. John Ellis, who obtained some birds from there and the seeds of grass came as food for these birds, which soon died, whereas the thrown out seed grew and flourished. It is called by the Sinhalese "ratatanacola," *i.e.*, foreign grass. Botanically it is *Panicum maximum.*

There is no doubt that this is an excellent fodder grass, and it is used by Mr. Mollison to feed his cattle in the Government Dairy in Poona. It will grow well on the cinnamon sand of Colombo, but does not grow so well on swampy and low ground as Mauritius grass does.

It is not used in the Dairy, as the opinion in Ceylon is that, though this grass is very excellent for horses, yet it is not so good for milch cows, as it is believed to have the tendency of diminishing the quantity of milk. Nothing seems to be known as to its effects upon the quality of milk. This, we think, should be inquired into.

An analysis of Guinea grass grown near Kandy, after being dried in the sun, is given by Mr. Cochran :—

	Per cent.
Moisture	9·06
Proteids...	8·10
Fat	2·80
Sugar	4·70
Fibre, digestible	41·07
Vegetable fibre	22·50
Ash	11·77
	100·00

It contained a quantity of potash, soda, lime, magnesia, small quantity of iron; was deficient in phosphoric and sulphuric acids.

An analysis of Guinea grass grown in India is as follows :—

	Per cent.
Water	63·38
Solids	36·62
	100·00
Solids.	
Fat (ether extract)	·84
Proteids	1·88
Carbohydrates...	19·36
Fibre	8·79
Salts	5·75
	36·62

Nutritive ratio is 1 to 11·3.

(3) *Common Creeping Grass.*—This appears to be a name common to several species of grass, among which is one having the native name of "tuttari" and the scientific name *Andropogon aciculatus*. This grass is more valuable as a bottom grass than as a fodder grass, making a good fine turf for a pasture.

(4) *Couch Grass.*—This is the Sinhalese "etora," called botanically *Panicum repens*. It is a valuable fodder grass, and is said to be a great milk producer in buffaloes, and is excellent for calves and sickly cows, and moreover it is a cheap grass. Its analysis by Mr. Kelway Bamber is as follows :—

	Per cent.
Moisture (air-dried as hay)	65·00
Solids.	
Fat, &c. (ether extract)	3.50
Proteids	13·47
Carbohydrates	57·77
Fibre	19·50
Ash.	6·16
	100·00

Nutritive ratio is 1 to 4·8.

It will be observed that it is richer than Mauritius grass in proteids and ash, and that with regard to salts, it contains more phosphates and lime.

(5) *Belatana.*—This is the Sinhalese "wal-kurakkan" (*Eleusine Indica*), and is good fodder grass, more especially for buffaloes, though it is good for cows.

Mr. Kelway Bamber's analysis is as follows :—

	Per cent.
Moisture (air-dried as hay)	68·59
Solids.	
Fat (ether extract)	6·27
Proteids	10 72
Carbohydrates	43·74
Fibre	29·40
Ash (salts)	9·87
	100·00

Nutritive ratio is 1 to 5·4.

(6) *The Dhoob Grass.*—The Dhoob grass has no Sinhalese name, strange to say, though it is well known by its Tamil name "arugampillu" and by its botanical name of *Cynodon dactylon*. Its effect upon cattle is excellent as it is seen at Irunativu, where it grows very luxuriously. Unfortunately it does not grow so well in the low countries of Ceylon about Colombo.

Mr. Kelway Bamber's analysis is as follows :—

	Per cent.
Moisture (air-dried as hay)	51·00
Solids.	
Fat (ether extract)	4·65
Proteids	1·15
Carbohydrates	58·37
Fibre	26·00
Ash	9·83
	100·00

It is thus richer in fat than Mauritius grass and etora, much poorer in proteids, but richer in salts, particularly phosphates and lime.

(7) The grass known as "undupiyali" exists in two different kinds :—

Mah-undupiyali.
Hin-undupiyali.

Mah-undupiyali is called *Desmodium heterophyllum* botanically, and is an excellent fodder plant. Hin-undupiyali is *Desmodium triflorum*. These plants are really leguminous fodder plants.

The analysis of Mah-undupiyali as performed by Mr. Kelway Bamber for us is—

	Per cent.
Moisture (air-dried as hay)	71·34
Solids.	
Fat (ether extract)	3.40
Proteids	13·50
Carbohydrates	48·57
Fibre	28·53
Ash (salts)	6·00
	100·00

Nutritive ratio is 1 to 4·1.

The ash of this plant consisted of 5·57 per cent. soluble ash and only ·43 per cent. insoluble ash; it is rich in phosphates, in lime, and in magnesia.

It will be noticed that this plant contains about the same fat as the Mauritius grass, the same proteids as etora, but it is deficient in carbohydrates, and contains a large quantity of fibre.

The undupiyalis are considered to be valuable plants, helping to make a compact turf. They are supposed to take the place of white clover and birds'-foot trefoil of English pastures, though of course they are but poor substitutes.

(8.) *Et-tana.*—This is a valuable grass for cattle. It is very common, growing on the road sides of Colombo, and indeed forms one of the important foods of buffaloes and native cows. It is thought that it might be improved and more used.

The analysis of the grass by Mr. Kelway Bamber is as follows:—

	Per cent.
Moisture (air-dried as hay)	61·00
Solids.	
Fat (ether extract)	3·54
Proteids	11·70
Carbohydrates	52·56
Fibre	24·10
Ash (salts)	8·10
	100·00

Nutritive ratio is 1 to 6·9.

(9) *New Zealand Grass* (Paspalum).—This has been imported, and apparently flourishes at an elevation, and is good for cattle, but it is not available in the low country. Experiments might be made upon this.

Conclusions.—Grass is the most important article of food for milch cows, and if a dairy is desirous of producing excellent milk, it must pay considerable attention to grass. Whether a grass grows well or does not grow well depends largely upon the soil.

No person going to the Government Dairy can fail to be struck with the great difference between the fine crop of Mauritius grass situate on the black soil and the impoverished native grass struggling for an existence upon the white sandy soil. The explanation is to be found in the analyses performed for us by Mr. Kelway Bamber.

The sandy soil will not retain moisture, and is markedly deficient in all useful materials, and in fact is 97·4 per cent. of sand, whereas the other soil is much better.

When the soil of the centre of the Racecourse is examined it is seen to be largely sand, and its analysis must be similar to that in the Government Dairy, and this, we think, accounts for the feeble condition of the grass. Really it may be said that the cattle of the Dairy are altogether stall fed, *i.e.*, "soiled," as the sustenance they get from the Racecourse or from the part of the Dairy over which they graze is small.

Mauritius grass appears to be the best available grass, but it does not appear to us to be suitable to make hay from, and is far from being an ideal grass. It appears that the Dairy has not quite sufficient Mauritius grass for its needs in some seasons of the year. There is a grass field adjoining the Dairy on the opposite side of the road from the entrance, about 4 acres in extent, and this we would recommend to be attached to the Dairy temporarily until the Government has considered more fully our final recommendations. If this were done, then the Dairy would, we feel sure, be well supplied with grass, as this land is low-lying.

As regards the other grasses, we feel that there ought to be a good grazing pasture provided for the cattle, having a good bottom grass like "tuttari," and containing a mixture of "etora," "belatana," "arugampillau," "undupiyali" (mah-undupiyali, hin-undupiyali), "et-tana."

This we believe to be quite out of the question upon the present Dairy site, and also impossible, at all events for many years of good manuring, on the Racecourse, and we are inclined to view the present site of the Dairy as most unsuitable, for it must be remembered that the Racecourse, poor as it is, has been rented on only a monthly lease.

One difficulty which we have noticed with regard to the manuring of the land in the Dairy is that the ants very often remove the manure, which in this way is prevented from benefiting the dry sandy soil. Judging by the way in which such imported grasses as Mauritius, Guinea, and New Zealand have taken to the land and have flourished, we are of the opinion that experiments should be conducted upon scientific lines to see if any other valuable grasses can be introduced into the low countries of Ceylon, and we would venture to suggest that Mr. Carruthers of Peradeniya, along with Mr. Drieberg, Superintendent of the School Gardens, be consulted with a view to trying experiments on such grasses, having in view the production of good fodder for milch cattle, and particular attention being paid to Indian grasses.

Private enterprise cannot be expected to try such experiments, nor can we expect the Sinhalese to cut down their cocoanuts for the purpose of making pastures, but we think that, in certain localities to be mentioned later, a pasture could be made which would tend to improve the Dairy milk, and perhaps serve as a model for the agricultural interest of the Island. Though we have considered the subject of experiments upon grasses, yet we feel that it is beyond the scope of the present report to deal with the matter in detail.

(*b*) *The concentrated Foods.*—It is necessary to give animals more or less concentrated foods, and Mr. Mollison lays down that concentrated food for milch cattle should have its ratio of flesh formers to heat givers as 1 to 6. The concentrated foods which are supplied to the cattle are, as we have already seen in the introductory section—

(1) Poonac.
(2) Cotton seeds.
(3) Bovinia.

(1) *Poonac.*—The poonac which is supplied is gingelly poonac, and is the cake obtained after the expression of the oil from the seeds of *Sesamum indicum* and *Sesamum orientale.* Its real name is gingelly poonac. The analysis according to two authorities is as follows :—

	(J. Hughes.) Per cent.
Water	9·78
Solids	90·22
	100·00
Solids.	
Oil	7·50
Proteids	30·37
Carbohydrates	27·12
Fibre	12·21
Ash	13·02
	90·22

This poonac therefore contains a quantity of oil. There is no doubt that next to linseed cake this is the best poonac for the cattle, and it is not so expensive as the former. It is easily digested. It is broken up and well mixed with water. We think that too much water (and this should be inquired into) is used, and that it should be given to the cattle in a different way. It is readily attacked by a mould. With regard to its nutritive value, 100 lb. of gingelly poonac would give—

	lb.	lb.
Proteids	30·37	—
Digestible carbohydrates	—	27·12
Oil 7·5 by 2·3 equivalent as carbohydrates	—	17·25
	30·37	44·37

The nutrient ratio is therefore : flesh formers 30·37 to heat producers 44·37, or 1 to 1·4. Gingelly poonac alone would be a too concentrated food to give to milch cattle. Other valuable poonacs are linseed, ground nut, and cocoanut. Linseed is the best feeding cake, but it is too expensive. Groundnut is very concentrated. Its nutrient ratio is 1 to 1·8. Cocoanut is not so concentrated as the other cakes, its ratio being 1 to 2·9, and is therefore good, but it is objected to because it is said to affect the milk injuriously. In the Dairy it is only used for calves and Coast bulls.

(2) *Cotton Seed.*—These are the seeds of a species of *Gossypium*, probably *Gossypium herbaceum.* They are crushed by a cooly and mixed with the poonac and bovinia and a liberal supply of water. We suggest that they be crushed by a machine, which would save time and money, if such a machine is obtainable.

An analysis given on page 26 of Mr. Mollison's text-book on Indian Agriculture by Mr. Collins in Surat is—

	Per cent.
Moisture	6·83
Solids	93·17
	100·00
Solids.	
Oil	16·51
Proteids	12·54
Carbohydrates	32·56
Fibre	27·11
Ash	4·47
	93·17

Its nutritive ratio in 100 lb. is therefore—

	lb.	lb.
Proteids	12·54	—
Digestible carbohydrates	—	32·560
Oil 16·51 by 2·3	—	37·973
	12·54	70·533

The nutrient ratio is therefore 12·54 to 70·53, or 1·0 to 5·6.

Cotton seeds are held to be good for feeding milch cattle, as they are supposed to increase the quality of the milk. Their nutrient ratio shows their value to be good. We found that the seeds were infested by certain beetles, and we sent these to Mr. Green, the Government Entomologist, at Peradeniya, and he reported that they consisted of—

(1) Trilobeum casteneum, a well-known grain pest.
(2) Alphitrobius piceus, a meal worm.

The third kind was probably a species of Plalysoma, which was preying upon the other two beetles.

He recommends that in future the seeds be kept in close fitting tins, and that the insects be killed by rags soaked in carbon bisulphide laid on the top of the seed in the tin. Napthalin may be used instead of carbon bisulphide. The cotton seed should be exposed to the air for about one hour, in order to get rid of the smell before being ground up.

(3) *Bovinia.*—Bovinia is the patent food given to the cattle of the Government Dairy, and is a kind of bran, and is mixed with the poonac and the cotton seeds in the watery fluid given to the cattle. As we could find no analysis, we got Mr. Kelway Bamber to make one for this report, and it is as follows :—

	Per cent.
Water	12·90
Solids	87·10
	100·00
Solids.	
Oil	4·71
Proteids	14·01
Carbohydrates	54·90
Fibre	9·04
Ash	4·44
	87·10

The soluble ash was to the insoluble as 12 is to 1. The ash contained a fair amount of phosphoric acid, but was very deficient in lime. The nutritive value in 100 lb. is therefore—

	lb.	lb.
Proteids	14·01	—
Digestible carbohydrates	—	54·90
Oil 4·71 by 2·3	—	10·83
	14·01	65·73

The nutritive ratio is therefore 14:01 to 65·75, or 1 to 4:6.

The following is a comparison of the Bovinia with wheat bran :—

Nature of Analysis.	Bovinia.	Wheat Bran.
Water	12·90	12·93
Solids	87·10	87·07
Oil	4·71	4·94
Proteids	14·01	7·56
Carbohydrates	54·90	65·78
Fibre	9 04	5·47
Ash	4·44	3·32

Bovinia is therefore richer in proteids and salts than wheat bran, but poorer in carbohydrates. It seems to be a useful addition to the rations, giving bulk and lightness to the food, and keeping the animals in good condition. It seems to be a wheat bran with the addition of proteid material.

Certain other Foods.—Under this heading we propose to discuss—

(1) Rice.
(2) Ulundu.
(3) Kollu.
(4) Oats.
(5) Roots.
(8) Brewers' grain.
(7) Indian corn.

Rice.—Rice congee is not to be recommended, as it increases the quantity of milk without improving the quality. It is said to be of use to young cattle.

Paddy Straw.—Dry paddy straw is said to be good and to increase the quality of the milk. It should be specially cut, and about 5 lb. should be allowed to each cow per diem, and if supplied should be purchased on a contract at so much a pound.

We have had the Ceylon paddy straw analyzed by Mr. Kelway Bamber, and the result is as follows :—

	Per cent.
Water	5·50
Solids	94·50
	100·00
Solids.	
Oil	1·70
Proteids	4·90
Carbohydrates	48·65
Fibre	26·40
Ash	12·85
	94·50

The ash contains 10·08 of silica, and the proteids contains ·784 of nitrogen.
The nutritive ratio therefore is :—

	lb.	lb.
Proteids	4·90	—
Carbohydrates	—	48·65
Oil 1·70 by 2·3	—	3·91
	4·90	52·56

That is to say, the ratio is 4·9 to 52·56, or 1 to 17. This analysis may be compared with the average of certain Indian paddy straws by Dr. Van Geyzel of Madras with Poona rice straw by Mr. Collins :—

Nature of Analysis.	Ceylon Paddy Straw.	Indian Paddy Straw (Van Geyzel).	Poona Rice Straw (Collins).
Water ...	5·50	8·122	8·47
Solids ...	94·50	91·878	91·53
Oil	1·70	2·187	1·77
Proteids	4·90	1·783	1·18
Carbohydrates	48·65	40·684	47·03
Fibre ...	26·40	30·025	25·71
Salts (ash)	12·85	16·873	15·84

It is thus seen that Ceylon paddy straw contains less water and more solids than Indian, and that it is richer in carbohydrates and proteids, but poorer in fats. On comparing it with Poona rice straw, the ash again is defective, and again the proteids richer, but the carbohydrates nearly the same, and the oil almost the same.

(2) *Ulundu.*—This is a grain derived from the plant *Phaseolus maximus*, variety *radiatus*, and is excellent for fattening cattle. It is said to increase the quantity but not the quality of milk, but there do not appear to be any direct observations upon this point. The analysis of this pulse by Dr. Leather is given by Mr. Mollison in his book on Indian Agriculture :—

	Per cent.
Water ...	8·14
Solids ...	91·86
	100·00
Solids.	
Oil ...	·99
Proteids ...	18·50
Carbohydrates ...	59·11
Fibre ...	4·33
Ash ...	8·93
	91·86

The ash contained 4·42 of sand. Its nutritive ratio is 1 to 3. It therefore requires more carbohydrate and oily substances mixing with it.

(3) *Kollu.*—This is also a pulse from *Dolichos biflorius*. We have been unable to find its analysis, but like other pulses its ratio is found to be high in proteids. It is not considered good for milch cows, but is given after boiling to calves and bulls.

(4) *Oats.*—These are too expensive, and need not be considered.

(5) *Roots.*—We are of opinion that Mr. Drieberg should be asked to experiment upon the piece of land to be mentioned later, upon which we think the Dairy ought to be situated, on growing turnips and beetroots, as, without doubt, they would be good for the cattle at times.

(6) *Brewers' Grain.*—This is the spent residue when wort is extracted from malt, and is excellent for feeding purposes, and might be got from the Nuwara Eliya Brewery, 10 to 15 lb. per diem being mixed with other foods. Its composition is—

	Per cent.
Water ...	75·00
Solids ...	25·00
	100·00
Solids.	
Oil ...	1·68
Proteids ...	5·57
Carbohydrates ...	12·86
Fibre ...	3·89
Ash ...	1·00
	25·00

The nutritive ratio would be 5·57 to 16·72, or 1 to 3.

It increases the quantity of milk. It can be dried and kept easily.

(7) *Indian Corn.*—This is Zea Mays. According to Mr. Drieberg, it is grown in the Province of Uva, and can be obtained at Re. 1 per bushel. A cow would require 2 bushels per month. Dry cobs would be used and crushed in a crusher. Indian maize has been analyzed by Church as follows :—

	Per cent.
Water ...	12·5
Solids ...	87·5
	100·0
Solids.	
Oil ...	3·6
Proteids ...	9·5
Carbohydrates ...	70·7
Fibre ...	2·0
Ash ...	1·7
	87·5

Its nutritive ratio is therefore 9·5 to 78·9, or 1 to 8·3.

(*c*) *The Salts.*—Ordinary country salt is given to the cattle. Each cow receives 2 to 3 oz. of salt per diem. The salt is mixed with poonac, &c., in water and given in that way. Mr. Mollison gives 2 oz. of salt per diem.

(*d*) *The Water.*—The habit of the dairy is to give the cows water in their food.

The Mauritius grass contains a large quantity of water, and the concentrated foods are made into watery baths; so that the cattle get, we think, too much water with their food. We are inclined to think that drier food, and water obtained separately from a proper drinking trough, is better. This trough would have ½ lb. of poonac and ½ lb. of salt added to its water in order to make the cows to drink. Water of course is very important for milch cows.

When stall fed, a cow will consume 50 quarts of water per diem and give 18 to 23 quarts of milk; in fact the amount of water demanded is said to be an indication of the cow's milking abilities. For example, it is said a cow which does not consume 27 quarts of water per diem is a poor milker.

B.—*The Ration.*—We consider it most important from a practical and an economical point of view that a clear idea should be formulated as to what kinds of foods and how much of each kind should be given. The food of every animal must consist of—

Proteids	Salts
Carbohydrates	Water
Fats	

all of which are found in varying proportions in the grasses and concentrated foods already mentioned.

Proteids are the flesh formers, and carbohydrates and fats are the heat producers. All animal tissues contain more or less mineral matter, and this is supplied by the salts or ash in the food and by the salt given in addition.

Water exists in large proportion in all animal tissues and secretions, and therefore a considerable quantity of water is necessary, especially in milk-producing cows. The water of course varies considerably in grasses at different times of the year, particularly in the water or Mauritius grass.

All these various substances must be given to an animal, but they should not be given haphazard, but in definite proportions and for definite reasons; in other words, definite amounts of proteids, carbohydrates, and fats must be used.

But carbohydrates and fats both produce energy and heat, while proteids are flesh formers, it is therefore useful to compare proteids on the one hand to carbohydrates and fats on the other.

In order to do this, either carbohydrates must be calculated as fats, or fats as carbohydrates. It is found more convenient to calculate fats as carbohydrates. A given quantity of fat produces about 2·3 times as much heat as the same quantity of carbohydrates, therefore in order to express fats in terms of carbohydrates, the quantity of fat must be multiplied by 2·3.

In this way proteids may be compared with the non-proteids (carbohydrates and fats), and by dividing the quantity of proteids into that of the non-proteids the ratio of 1 : 10 is obtained.

This ratio is called the nutritive ratio. This nutritive ratio for milch cows has been worked out by Dr. Emil Wolf in Germany, by the Wisconsin Experimental Station in America, and by Mr. Mollison in India.

The following ratios are given :—

Country.	Proteids.	Non-proteids.
Germany	1 :	5·4
America	1 :	6·9
India	from 1 : 5 to 1 : 10, generally 1 : 6.	

a ration which, when reduced to proteids and non-proteids and gives a ratio such as these, is called a balanced ration. Such balanced rations are as follows :—

German.

	lb.
Digestible proteids	2·5
Digestible carbohydrates	12·5
Digestible fats	·4
Total ...	15·4

Nutritive ratio, 1 to 5·3.

American.

	lb.
Digestible proteids	2·15
Digestible carbohydrates	13·27
Digestible fats	·74
Total ...	16·16

Nutritive ratio, 1 to 6·9.

We next compare these with an Indian ration calculated by the Committee from certain details given in Mr. Mollison's work on Indian analyses :—

8 lb. of hay.	2 lb. of cotton seed.
10 lb. of green grass.	6 lb. of wheat bran.
2 lb. of groundnut cake.	

Quantity. lb.	Kind of Food.	Proteids.	Carbohydrates.	Fats.
8	Hay Jowari Kadbi	·17	3·61	·16
10	Green grass, Guinea grass	·18	1·93	·08
2	Groundnut	·99	·45	·62
2	Cotton seed	·25	·65	·33
6	Wheat bran	·47	4·11	·30
28	Total	2·06	10·75	1·49

Indian.

	lb.
Digestible proteids	2·06
Digestible carbohydrates	10·75
Digestible fats	1·49
Total	14·30

Nutritive ratio is 1 to 6·8.

Turning now to the Ceylon ration, as set forth in the introductory section for milch cattle, and to the various analyses set forth under grasses and concentrated foods, we find that the ration is made up as follows :—

Quantity. lb.	Kind of Food.	Proteids.	Carbohydrates.	Fats.
50	Mauritius grass	·75	7·00	·43
3	Cotton seed	·36	·96	·48
6	Poonac	1·82	1·62	·44
2	Bovinia	·28	1·09	·09
61	Total	3·21	10·67	1·44

To express 1·44 lb. of fats in terms of carbohydrates it is necessary to multiply by 2·3.
1·44 by 2·3 is 3·312.

Add this to the carbohydrates. 10·67 and 3·312 is 13·982 lb. of non-proteid food. Therefore the ratio of non-proteid food to the proteid food is 3·21 to 13·98, or 1 to 4·3. Therefore the nutritive ratio is 1 to 4·3.

The proportion of proteids to non-proteids is too high, which means that too much concentrated food is being used for the cattle, or, in other words, the feeding is too artificial. But there is a reason for this, for it must be remembered that the American, German, and Indian cattle are presumably fed upon grass grown upon good soil, whereas the Government Dairy cattle of Ceylon are fed upon grass which is grown upon soil which is practically sand, and which no doubt would make excellent glass, but which is not the proper soil to grow fodder for milch cattle.

It must also be remembered that the grass which can be produced on this soil is only Mauritius grass, which well deserves its name of water grass, and which is by no means an ideal fodder.

The following table shows the ratio of proteids to non-proteids in Mauritius and certain other grasses :—

Kind of Grass.	Proteids.	Non-proteids.
Mauritius	1	10·8
Green Jowari	1	8·8
Lucerne	1	4·5
Mixed pasture grass of America	1	3·2

We however consider, even taking into consideration these points, that the ratio is too high.

Mr. Mollison says that in India, although the ratio is generally about 1 to 6, yet it may be 1 to 5.

Because of the poverty of the soil and grass, we are inclined to calculate out a ration for the Government Dairy more nearly 1 to 5 than 1 to 6.

After careful consideration we think that the ration should contain dry fodder to reduce the water of the Mauritius grass, and as hay is not available in Ceylon, we consider that paddy straw may be used, and for this reason we had the paddy straw analyzed.

We therefore suggest that some such ration as the following should be employed at the Government Dairy :—

30 lb. of Mauritius grass.	1 lb. of cotton seed.
4 lb. of paddy straw.	5 lb. of bovina.
3 lb. of gingelly poonac.	

The total ration would thus be 43 lb.

If now attention is turned to the various analyses given under the heading of grasses and concentrated foods, the following table of proteids, carbohydrates, and fats can be calculated :—

Quantity.	Kind of Food.	Proteids.	Carbohydrates.	Fats.
30	Mauritius grass	·45	4·32	·26
4	Paddy straw	·17	1·99	·07
3	Gingelly poonac	·91	·81	·22
1	Cotton seed	·12	·32	·16
5	Bovinia	·70	2·74	·23
43	Total	2·35	10·18	·94

The first question to inquire into is whether the quantity of food in this ration is sufficient. This is best done by inquiring the weight of food given per lb. weight of the animal and comparing this with the German and American rations.

Taking the weight of a Government Dairy cow as 700 lb., this ration would mean—

·0033 lb. proteids per lb. weight of the cow
·0145 lb. carbohydrates do.
·0013 lb. fats do.

which can be compared with the German ration of—

·0025 lb. proteids per lb. weight of the cow
·0125 lb. carbohydrates do.
·0004 lb. fats do.

and with the American ration of—

·0021 lb. proteids per lb. weight of the cow
·01327 lb. carbohydrates do.
·0007 lb. fats do.

so that the proposed ration provides more food per lb. weight than the German or American rations. The second point is to find the nutritive ratio.

To express the fats in the terms of the carbohydrates, they must be multiplied by 2·3: ·94 by 2·3 is 2·162.

They must now be added to the carbohydrates; 10·18 and 2·16 is 12·34, therefore the proportion of proteids to non-proteids is 2·35 lb. to 12·34 lb., or 1 to 5·2; or, in other words—

The nutritive ratio is 1 to 5·2.

This ratio we consider to be necessary for the Sind milch cows fed on the poor grass grown on the wretched sandy soil of the Government Dairy. The grass and paddy straw would have to be chaffed together in a cutter. The cotton seed should be ground and mixed with the Bovinia, salt, and some chaffed straw, and moistened with water. The poonac should be broken up into pieces ½ inch in diameter and placed on the top of the mass, but not mixed through it, and the whole mass should be allowed to ferment for some hours before using. If possible, the ration should be varied from time to time, being carefully calculated out each time.

If it is ever possible to give the Government cattle good grass grown on good soil, and to supply them economically with good hay grown also on good soil, then a different and cheaper ration in the proportion of 1 to 6 would have to be calculated, but the above ration we consider meets the present need of the Dairy.

In order to facilitate the calculation of rations, we append a table of analyses of foods either grown in or easily and cheaply obtainable in Ceylon :—

Percentage of Digestible and Indigestible constituents in certain Foods.

Kind of Food.	Proteids.	Carbohydrates.	Fats.	Indigestible Substance.
Mauritius grass ...	1·51	14·46	·86	6·59
Guinea grass ...	1·88	19·36	·84	8·79
Etora ...	3·00	13·20	·70	4·75
Belatana ...	2·70	11·52	1·60	7·30
Dhoob grass ...	·42	21·27	1·70	9·57
Mah-undupiyali ...	3·82	13·98	·97	8·17
Gingelly poonac ...	30·37	27·12	7·50	12·21
Cocoanut poonac ...	13·62	44·57	16·53	12·45
Cotton seed	12·54	32·54	16·51	27·11
Bovinia	14·01	54·90	4·70	9·04
Ceylon paddy straw ...	4·90	48·65	1·70	26·10
Brewers' grain... ...	5·57	12·86	1·68	3·84
Indian corn	9·50	70·70	3·60	2·00

Another important factor in a ration is the proportion of the indigestible to the digestible ingredients in the food. In the German ration the proportion is 8·6 indigestible to 15·4 digestible. The indigestible ratio is therefore 1 : 1·7.

In the American it is 1 : 2·1. In the Indian it is 1 : 3·3. In the present Government Dairy ration it is 1 : 5. In the proposed Government Dairy ration it is 1 : 2·4. These indigestible foods are useful in giving bulk to the food and in preventing constipation.

SECTION IV.—THE TREATMENT OF THE CATTLE.

Under the head of the treatment of cattle we consider—

(1) The Dairy staff.
(2) The treatment of the cattle.
(3) The preparation of the food.
(4) Sanitation.
(5) Diseases.
(6) Mortality.
(7) Sale of the cattle.
(8) Model Farm stock.

(1) *The Dairy Staff.*—The staff employed upon the Dairy seems to us to be sufficient for its present needs.

We feel that the Dairy requires constant supervision, and if we had not felt that it was imperative, if the Dairy is to be a real success, to move it from its present unsuitable site, we would have suggested that the Superintendent of the Dairy should be given suitable quarters on the Dairy grounds.

As it is, we shall suggest in our final conclusions that if the Dairy is moved, it be placed under the resident supervision of a man as highly trained in agriculture as, for example, Mr. Drieberg.

It must be remembered that India employs highly trained men to supervise its dairies and agriculture. We consider that the Resident Manager, Mr. Rodrigo, is a good manager under proper supervision.

(2) *The Treatment of the Cattle.*—The cattle when first imported are kept for two weeks in the quarantine shed, in order to see if any disease is to break out in them. During this period they are gradually educated to alter their diet from the food which they were accustomed to in India to that upon which they are about to be kept in Ceylon, *i.e.*, from a dry diet to a wet diet.

It is of great importance to notice that these cattle imported into a strange country are fed quite differently from what they are in their own country, and that the grass is grown upon perhaps the worst piece of land for grass growing in the whole of Ceylon, and that they are compelled when they graze to eat anything which has grown big enough for them to bite.

On their arrival they are said, as a rule, to be in good condition; and very seldom has any disease broken out among them in the quarantine shed. Some deteriorate and become worthless within a year, while others may last for several years.

The average length of time during which a good cow remains profitable to the Dairy is about five years, *i.e.*, when it would be aged twelve years. One cow called "Queenie" has remained in the Dairy, and after being there for ten years, *i.e.*, aged 17 years, is still in good condition, but this is the exception and not the rule. This degeneration of the cow is attributed to (*a*) climate and (*b*) food.

(*a*). *Climate.*—It is argued that the climate of Sind is dry and at times cold, and that it is the constant moist heat of the low countries of Ceylon which is mainly to blame. Climate has something to do with this degeneration, but we cannot say we are convinced that it is the only cause with the Indian cow as it is with European cattle.

(*b*) *Food.*—We are inclined to think that the food is given too wet, and it must be remembered that Mauritius grass also at times contains a very large amount of water, and that if the food were given drier and the animals allowed to drink water separately, their digestion and the quantity and quality of the milk might be improved, and moreover an economical saving in food might result.

It is noticed that the quality and quantity of milk is not so good as that of the same cows in India, a fact which is demonstrated in the following table :—

Comparison of Average Dairy Milk with Indian Average Dairy Cow Milk (Sind Cows).

Nature of Analysis.	Dairy Bulk Milk.	Average Indian Milk.
Water	88·055	86·13
Total solids	11·945	13·87
Proteids	4·083	3·03
Lactose	4·095	5·34
Salts	·610	·70
Total solids, not fats	8·788	9·07
Fats	3·157	4·80

The cattle may be said to be entirely stall fed, *i.e.*, soiled, as they can get little grazing grass of any value in either the dairy compound or the racecourse. The dry cows graze all day on the Racecourse, and the milch cows graze there in the afternoon, while in daytime they wander about the Dairy compound nibbling at anything they can get. When in the Racecourse the bulls go with them, and they are looked after by one man.

We think that the cattle should be weighed from time to time, and we think that various carefully calculated rations should be tried upon a few cows and the effect noted upon the weight, general condition, and milk of the cows, with the view of providing more natural food, but we do not think that the cattle can be made to produce the proper quantity and quality of milk when fed upon grass grown upon sand, and particularly upon Mauritius grass.

The cattle are washed at the big tank in the Dairy. Milch cows are said to be washed every other morning, and dry cows and calves once a week. There is no place in the Dairy or anywhere else for the cows to bathe in, and we think that some means should be provided as in other dairies for cows to bathe in.

In the Introductory Section we have already mentioned the sheds in which the cattle are kept, and we are of the opinion that there is enough area per head for the number of cattle at present in the Dairy. The sheds cannot be said to be substantially built, and would bear considerable improvement; the walls are broken in places by the cattle hitting against them. We feel that the Government Dairy should be so built as to be a model to the people of Ceylon, instead of being in its present condition. The dry cattle are only housed in the lean-to sheds, there are no properly protected sheds for them. The keeping of the cattle in a ring fence is, in our opinion, excellent.

Cows about to calve are allowed an extra supply of food, *i.e.*, are altered from the diet of dry to the partial diet of milch cows (*vide* Introductory Section). After calving she is carefully attended to, and the food is gradually increased up to the maximum of a milch cow. This care has resulted in very few cases of illness during and after calving.

In the monsoons no difference is made in the treatment of the cattle, except that they are protected against rain by being kept in the shed.

(3) *The Preparation of the Food: The Mauritius Grass.*—This grass is cut by the coolies with sickles, and is then given to the cows in a whole condition. The grass is cut young, consequently there is not so much waste as if the grass were cut old. There is no hay or straw to mix with the grass. We should consider it better to chaff the grass and some paddy straw together by means of a chaff cutter, and give the cattle a mixture cut in half-inch length by this, and after that the Mauritius grass; at all events, a trial should be made, as the dryness of the straw absorbs the moisture of the green fodder and thereby becomes softer, and also ferments, giving, it is said, an odour and flavour agreeable to the cattle. If at any time grass is grown for the Dairy in a suitable soil and in quantity sufficient to make hay, we feel that it should be cut by means of a machine, but this is not necessary on the present Dairy grass fields.

The Concentrated Foods.—The cotton seed is ground up by a cooly in a very primitive manner. We think that it ought to be crushed in a crusher, if such a machine can be obtained. It is then mixed with broken up poonac and bovinia and salt and placed in big tubs of water. Mr. Mollison states that the method of dealing with concentrated foods in India is to moisten the cotton seed, bran, and salt with water and then to place the poonac, which has previously been broken into pieces about an inch in diameter, on the top of the moistened mass.

Mr. Mollison says that it is a common practice to mix the concentrated food with hay or straw and to moisten the whole with treacle and water, or supply water and to allow the mixture to ferment 24 hours, care being taken that it does not ferment till it is acid, the idea being to render the straw more digestible. Of course for this purpose the hay or straw must be chaffed. This method we think might be tried in the Dairy. Treacle might be obtained from the Baddegama Sugar Estate.

Salt.—There is nothing to be said under this head.

Water.—We are of the opinion that a trough for drinking purposes ought to be present in the Dairy, and the cattle should have free access to the water several times a day.

Care of the Foods.—With regard to the care of the artificial food, nothing can be worse than the condition of the floor of the store in which it is now kept. Rats destroy the floor in their successful attempts to get at the food. We feel that a proper storehouse raised a little from the ground should be built, and that beetles should be destroyed in the cotton seed, if it is necessary to store quantities of food.

(4) *Sanitation.*—No person with the slightest knowledge of sanitation could fail to be struck with the fact that the Manager's house is joined to the cows' shed directly, and that the milk is collected upon the verandah of the house. This is a subject which need not be dilated upon, and it will be sufficient for us to say that we condemn it strongly, on the ground that if the Manager or his family fell ill with an infectious disease the milk would run the greatest risk of being contaminated by means of the flies, which are very numerous.

We do not consider that there are enough water taps for flushing purposes. As there is not sufficient water power for a hose to be used, then there should be sufficient tap supply of water.

The buildings themselves are kept clean and are washed daily with Jeye's fluid and water, and the dung is removed fairly quickly to the dung heap. But we do not approve of the centre of the enclosure being simply ordinary earth, and we think it ought to be cement, covered daily with sand or gravel to prevent the cows from slipping. We think that the cement of the floors of the building should be marked with little drains to remove urine, &c., to the ordinary drain which runs along the shed.

The disposal of the urine and the washings of the sheds by allowing them to pass down an open drain which runs out on the public road is bad, and Dr. Philip, the Medical Officer of Health of Colombo, made a complaint to the Committee *re* this drain. No urine or washings of the sheds should be allowed to go into this drain, but all should go to the septic tank and then be pumped on to the grass land. Unfortunately the pump is quite inadequate to do this, and in our opinion a new pump like that which the Municipal Council provides for its coolies to pump water from the lake into the water cart should be provided, and the nuisance of the drain abated.

The present pump takes about four hours to empty the tank, and before this would happen it would be filled up again. If this pump were to be used, it would take about four coolies costing Rs. 15 per month to do nothing but work at emptying the tank, whereas it ought to be emptied by two coolies in an hour.

The manure from the Dairy is thrown in the most primitive way possible on to the ground. We think it ought to be collected in a trough 12 ft. by 12 ft. by 3 ft., and in this way pollution of the ground avoided and valuable ammonia preserved. The trough should have a little well at one end for fluid manure to sink into, which could be emptied as desired.

As regards the isolation of infectious disease, we consider the quarantine shed to be good, as it could be destroyed and replaced without much cost after an epidemic.

The method of dealing with an epidemic would be as follows: The infected animals would be immediately removed to isolation ground into separate cadjan huts. If they died they would be buried where they were and the hut burnt. If they recovered, they would be removed to the quarantine shed, and after being kept for the proper time would be washed and taken back to the Dairy. Suspects would be removed to the isolation ground and separated in their own shed.

(5) *Diseases.*—There does not appear to be much disease among the cattle. The diseases are mostly indigestion, debility, diarrhœa, mammitis, fever, prolapsus vaginæ, worms, retention of placenta, foot-and-mouth disease, rheumatism, and accidents.

When an animal becomes very objectionable, we think that it should be killed, and we see no advantage in keeping miserable-looking animals on the premises which will not re-act to treatment and which cannot be sold.

The death-rate does not appear to be very high, probably due to skilful treatment of the ailments.

(6) *Mortality.*—The following is the average death-rate for the last nine years:—

Cows 4·2 per annum, or, excluding the rinderpest one year, 2·5.
Bulls ·3 per annum, or, excluding the rinderpest one year, ·1.
Calves 10 per annum.

The death-rate has markedly decreased during the last few years.
The causes of death have been:—

Rinderpest (19 cows and bulls out of a total number of deaths of 45).	Worms.
Old age.	Hoof and mouth disease.
Accidents.	Hoven.

(7) *Sale of Stock.*—Elsewhere it has been pointed out that the imported stock deteriorates and becomes useless to the dairy. Moreover, a number of calves are born annually in the Dairy, and it appeared of importance to inquire what happened to these animals. We find that there is a sale of deteriorated animals and calves twice a year. We understand that there is no board of inspection of these animals before they are sold.

Cows.—At a recent sale during the sitting of the Committee, prices were obtained on the deteriorated cows:—

	Rs. c.
Highest	60 0
Lowest	30 0
Average	41 70

These of course should be got rid of as soon as possible, as they cost per month Rs. 12·60 for maintenance.

Calves:—We noticed a number of rather old calves in the Dairy, and on inquiry found that they were always sold aged between 18 and 24 months. At the recent sale these calves reached—

	Rs.	c.
Highest	130	0
Lowest	30	0
Average	52	66

We inquired the price of a calf at 12 months and at 18 months, and were told that they were never sold.

We inspected calves aged 12 months just after weaning and found some of them thin and starved, though others were not, as indeed they must be, as the mother's milk is sold instead of feeding the calf, and these calves are fed only on fluid Bovinia and poonac and strippings. We are therefore of the opinion that it would not be a good plan to sell them at that age, even though the average estimated price is Rs. 25.

We then went carefully into the matter of the cost of keeping a calf over 12 months of age, and find that it is Rs. 3 per month. Now, if a calf aged 12 months is worth Rs. 25, and it is kept 12 months longer, it should be worth Rs. 25 and Rs. 36, that is, Rs. 61, whereas the average price is only Rs. 52·66, *i.e.*, a nett loss per calf of Rs. 8.

On the other hand, if the calf is kept for between 15 to 18 months, it fattens up rapidly, grows well, and a vastly improved animal from that aged 12 months.

Its value at the end of 18 months would be Rs. 25 + Rs. 18, *i.e.*, Rs. 43, and the estimated average price is very nearly the same as 18 to 24 months, *i.e.*, Rs. 53, so that it would be sold profitably then. We are therefore of the opinion that calves should be sold between 15 to 18 months, and not kept after 18 months, except in individual cases and for special reasons, until our final recommendations have been fully considered and carried out.

Bulls apparently have not a great demand. If bulls, cows, or calves cannot be sold at ordinary auction, they would be sold to the butcher, and the bulls worth Rs. 250 would sell at Rs. 80, and calves aged 18 months at Rs. 25.

Increase of Milch Cows.—We are of the opinion that if the calves were reduced in number, more milch cows could be kept, which of course would mean more milk, *e.g.*, the cost of 20 calves equals 9 cows. Therefore a reduction of 20 calves by holding quarterly sales would enable 9 more milch cows to be kept without increased cost.

If, however, our final recommendations are carried out, there will be little expense in rearing cattle on the Dairy estate, and the better calves from good milkers could then be reared and a careful selection of bulls and heifers from good milkers could be made, and then the stock could be improved without importation.

(8) *Model Farm Stock.*—The receipts of the Model Farm go to Dairy account credit, and the expenses come from Dairy account, but are shown in a separate account.

The milk from the Model Farm, one to two bottles per diem, goes to the Smallpox Hospital, and brought in Rs. 39·74 in the month of May. The present cows and sheep of the Model Farm were bought by Dairy money. As the Model Farm appears to be useless to the Dairy, we think it should be separated from the Dairy. Mr. Drieberg says that the cattle did not thrive on the Model Farm, and therefore the farm ceased to be useful for the Dairy.

SECTION V.—THE MILK.

The milk of the Dairy may be considered under the following heads:—

(1) Introductory.
(2) The quantity of the milk.
(3) The quality of the milk.
(4) Remarks on the milk.
(5) Conclusions with regard to the milk.

(1) *Introductory.*—The cows are milked from 4 to 5 A.M. and about 1 to 2 P.M., so that about eight hours intervenes between the morning and the evening milking, and about fourteen hours between the evening and the morning milking. Therefore there should be a larger quantity of milk of a poorer quality in the morning than in the evening, according to the experience of most dairies, which is that if the cows are milked at equal intervals, the milk is about the same, but if they are milked at different intervals, the short interval has the less quantity but the greater quality. This will be referred to again.

The coolies are supposed to wash their hands before starting to milk, and they wipe the udders of the cows with a cloth before milking. Often the calf is allowed to suck a little to start with, then the milk is drawn by the cooly, and lastly, the calf is allowed to take the final strippings. The milk is received into tin cans made locally.

After milking a cow, the cooly comes and empties his can into a large zinc bucket suspended on a strong spring balance, which indicates upon a dial the quantity of milk in the bucket. It appears to be fairly accurate, but requires careful watching, as rust, &c., might damage it considerably. The milk is then poured into the large bulk can. During the afternoon this is covered over by mosquito netting, but this appeared to us to be useless, and dozens of struggling flies were to be seen in the milk. As flies are well known to be the spreaders of disease we advised a strainer, and from that time muslin has been tied on the top of the can; but we think that a proper block tin strainer should be made to fit upon the top of the can. The muslin thus used as a strainer became tinted a distinct yellow colour, perhaps due to the yellow in some colostrum corpuscles in the milk. The milk is then poured into the various cans for the different institutions supplied, viz., Queen's House, the Military Hospital, the General Hospital, the Lady Havelock Hospital, Prison Hospital, De Soysa Lying-in Home. It is then sealed and sent off to the hospitals. The flies used to be strained off before it was despatched. The milk cans appeared to us to be old and pitted, and we consider new ones should be obtained. The milk cans are then placed upon a two-wheeled cart and wheeled off to the hospitals. No means are taken to protect the milk cans from the sun, and they must get very

warm in the afternoon. Mr. Drieberg says that he used to use a jacket wetted with water to keep the milk cool, but this is not done now.

We object to the milk being collected upon the verandah of the Manager's house, where numerous flies abound, and we consider there ought to be a proper milk room separate from the house. We condemn the two-wheeled cart, and consider that it ought to be four-wheeled, and we consider that there should be a hood or protection from the sun, and that the milk cans should be protected by a canvas jacket in the afternoon wetted with water. We consider that the milk gets too much shaken up by the two-wheeled cart and too much heated by the afternoon sun.

After use the milk cans are said to be always cleaned by brushes and sand. The sand has been lately discontinued, and we think advisedly, and that the cans should be scoured with salt and then thoroughly rinsed with boiling water.

We consider that a proper boiler should be provided fitted with a tap for the purpose of boiling water to scald the milk utensils. It would cost some Rs. 200.

(2) *The Quantity of the Milk.*—The great feature of the Sind cows and the reason why they are imported is because they are supposed to yield a greater quantity of milk. It is estimated that the average Sinhalese cow gives 2 pints of milk per diem, and that the Sind cow gives 8 pints in India.

The point was investigated, and it was found that with 46 cows giving milk, the average yield per diem was 282 pints, that is, 6 pints per diem per cow. A cow nearly dry gave only 5 oz. of milk, and the best cow in full milk in the period investigated gave 11 pints.

The quantity of milk produced by an individual cow varies of course considerably with the breed, the age of the cow, the age of the calf, and the kind of food, the time of milking, fright, or disturbance.

The Breed.—It is clear that the Sind cow is a better producer of milk in quantity than the Sinhalese cows, but this matter we have already referred to under the head of Breed.

The Age.—It is found that the greatest quantity of milk is given by a Sind cow in this Dairy when at its third or fourth calf, *i.e.*, at seven to eight years of age. After this it deteriorates and becomes worthless to the Dairy.

A cow in the Dairy is very often in calf when it has a calf at foot, and thus the dry period is lessened. Some cows will take the bull at six weeks, the average at the second month, and at the longest interval at nine months.

The average time which a cow is dry is as follows :—

Length of Time Dry.	Percentage of Cows.
Two months and under	10
Three do.	15
Four do.	15
Five do.	55
Nine do.	5
Total ...	100

The average length of time in which a cow is dry is 4½ months.

The Age of the Calf.—A table is given to show an individual instance of variation of the quantity with the age of the calf :—

The calf was born on February 22, 1902.

Dates.	Quantity of Milk in Pints and Ounces. Pints. oz.	Increase or Decrease in Pints only.
February 22 to 28	64 10 ...	—
March 1 to 31	372 0 ...	+ 308
April 1 to 30	381 5 ...	+ 73
May 1 to 31	342 5 ...	— 39
June 1 to 30	283 5 ...	+ 41
July 1 to 31	337 5 ...	+ 54
August 1 to 31	259 5 ...	— 78
September 1 to 30	257 5 ...	— 2
October 1 to 31	185 5 ...	— 62
November 1 to 11	11 15 ...	— 174

The total quantity of milk given by this cow was 2,494 pints in nine months and seventeen days. The quantity of milk first of all increases and then diminishes, but increases in June and July, probably due to the quantity of water in the Mauritius grass after the south-west monsoon ; after that the diminution is steady till the cow becomes dry. The food has a marked effect. The more watery the food the greater the quantity of milk.

The quantity of milk is low in the dry months of January, February, March, and April, and rises in the damper parts of the year, and is at its maximum in November.

The daily quantity per cow runs from a little above 5 pints per diem in February to nearly 9 pints per diem in November, and the total quantity from 10,000 pints in February and April to nearly 13,000 pints in October.

The rain of May and October influences the milk, but the supply does not follow the drop of the rain curve in July, August, and September. It is thus seen that the rain influences the milk only when the increase is marked or the decrease has continued some time, and is also marked, and this we feel sure is due to the water in the Mauritius grass. Now, the Mauritius grass is known as water grass, and its percentage of water varies with the rainfall : more rain, more water ; less rain, less water, as has already been pointed out. The cows thus get more water with their food in the wet weather and less in the dry, hence the quantity of milk is more in the wet weather and less in the dry. It is also well known that rice congee given to cows increases the quantity, but not the quality of milk.

The Time of Milking.—The attached table gives the quantity of milk produced by the herd in the mornings and evenings of August, 1903 :—

Quantity of Milk produced in the Month of August, 1903.

Date.	Morning. Pints.	oz.	Evening. Pints.	oz.	Date.	Morning. Pints.	oz.	Evening. Pints.	oz.
August 1	199	5	129	0	August 17	195	15	123	5
Do. 2	199	10	131	0	Do. 18	197	15	126	0
Do. 3	198	10	131	0	Do. 19	197	15	127	0
Do. 4	200	0	130	0	Do. 20	200	10	128	10
Do. 5	200	15	128	10	Do. 21	203	15	127	0
Do. 6	199	15	129	0	Do. 22	203	0	123	0
Do. 7	198	10	125	15	Do. 23	203	0	125	0
Do. 8	195	10	126	10	Do. 24	202	0	123	0
Do. 9	195	10	127	15	Do. 25	201	15	122	5
Do. 10	194	10	126	5	Do. 26	204	5	121	15
Do. 11	194	10	127	5	Do. 27	200	15	122	10
Do. 12	192	15	125	10	Do. 28	197	0	125	0
Do. 13	194	5	122	15	Do. 29	195	10	124	5
Do. 14	195	5	122	10	Do. 30	197	0	123	0
Do. 15	192	0	126	0	Do. 31	196	0	124	5
Do. 16	193	0	123	0					

Morning average 197 pints, evening average 125 pints ; or, taking the average per cow, morning average 4·3 and evening average 2·7 pints. It is thus seen that there is considerably more morning than evening milk, and the explanation is that the length of time between the morning and the evening milk is 8 hours, whereas between the evening and the morning it is 14 hours.

Comparison with morning and evening milk for the month of August, 1893, of the Sind cow milk in the Poona Diary in India milked at the same time is as follows :—

Kind of Milk.	Government Dairy, Ceylon, August, 1903.	Poona Dairy, India, August, 1893.
Morning	4·3	8·0
Evening	2·7	5·8

The ratio between the two milks is : morning 1 : 1·8 and the evening 1 : 2·1, or, in other words, the quantity of milk produced in India is double that in Ceylon.

This amount of milk given in August, 1903, does not correspond to the amount of milk given in August, 1902, which is much higher, and in which the average is more like the Indian average.

(3) *The Quality of the Milk.*—As very few investigations have been made into the quality of the milk at the Government Dairy, it was necessary to make a number of analyses.

The following analyses of bulk milk have been made :—

Analysis Number 1 (Kelway Bamber).

Morning Bulk Milk.

Miscroscopical	Fatty globules vary very much in size
Specific gravity at 60° F.	1029·7
Cream	8 per cent.
Water	89·300
Solids	10·700
	100·000
Solids.	
Proteids	3·720
Lactose	3·370
Salts	·627
Solids, not fat	7·717
Fat	2·983
	10·700

Analysis of the Ash.

Lime	24·976
Magnesia	7·600
Potash	23·980
Soda	17·278
Oxide of iron	A minute trace
Phosphoric acid	13·120
Sulphuric acid	2·683
Carbonic acid	2·800
Chlorine	10·418
	102·855
Less chlorine as oxygen	2·342
	100·513

Analysis Number 2 (Kelway Bamber).

Afternoon Bulk Milk.

Miscroscopical	Fatty globules vary very much in size
Specific gravity at 60° F.	1029·2
Cream	9 per cent.
Water	88·300
Solids	11·700
	100·000
Solids.	
Proteids	3·980
Lactose	3·509
Salts	·608
Solids, not fat	8·097
Fat	3·603
	11·700
Ash.	
Lime	26·168
Magnesia	7·200
Potash	24·480
Soda	15·333
Oxide of iron	A trace
Phosphoric acid	13·320
Sulphuric acid	2·029
Carbonic acid	2·320
Chlorine	13·160
	104·019
Less chlorine as oxygen	3·820
	100·190

Analysis Number 3 (Committee).

Microscopical	Fatty globules various
Specific gravity (corrected)	1026·8
Cream	7 per cent.
Water	86·71
Solids	13·29
	100·00
Solids.	
Proteids	3·65
Lactose	5·50
Salts	·59
Solids, not fat	9·74
Fat	3·31
	13·29

Analysis Number 4 (Committee).

Microscopical	Fatty globules various
Specific gravity (corrected)	1026·0
Cream	10 per cent.
Water	87·17
Solids	12·83
	100·00
Proteids, Lactose	8·31
Salts	·58
Solids, not fat	8·89
Fat	3·94
	12·83

Analysis Number 5 (Committee).

Microscopical	Fatty globules various
Specific gravity (corrected)	1026·5
Cream	6·5 per cent.
Water	88·55
Solids	11·45
	100·00
Solids.	
Proteids, Lactose	8·33
Salts	·62
Solids, not fat	8·95
Fat	2·50
	11·45

Analysis Number 6 (Committee).

Boiled Bulk Milk.

Specific gravity (corrected)	1027
Water	87·46
Solids	12·54
	100·00
Solids.	
Proteids, Lactose	9·09
Salts	·59
Solids, not fat	9·68
Fat	2·86
	12·54

Analysis Number 7 (Committee).

Microscopical	Fatty globules various
Specific gravity (corrected)	1027·5
Cream	6 per cent.
Water	89·24
Solids	10·76
	100·00
Solids.	
Proteids	4·46
Lactose	3·18
Salts	·58
Solids, not fat	8·22
Fat	2·54
	10·76

Analysis Number 8 (Committee).

Microscopical	Fatty globules various
Specific gravity (corrected)	1028·5
Cream	7 per cent.
Water	87·71
Solids	12·29
	100·00
Solids.	
Proteids, Lactose	8·07
Salts	·68
Solids, not fat	8·75
Fat	3·54
	12·29

An average of the preceding analyses is as follows :—

Microscopical	Fatty globules vary in size
Specific gravity	1,027·5
Cream	7·6 per cent.
Water	88·055
Solids	11·945
	100·000
Solids.	
Proteids	4·083
Lactose	4·095
Salts	·610
Solids, not fat	8·788
Fat	3·157
	11·945

It would of course be rash from only eight analyses to lay down a standard for the Dairy milk but the above average is useful in giving a general idea of the condition of the milk for the month of August, 1903.

We have next compared this average with various standards. A comparison of average Dairy milk with various standards is as follows:—

Nature of Analysis.	Government Dairy.	Notter's Hygiene.	Köneg.	Winter Blyth.	Fleischman.	Kirchner.	Average of American Analysis.	Average of English Analysis.
Specific gravity ...	1027·5	1032	—	1027 to 1035	—	—	—	—
Cream ...	7·6	8	—	—	—	—	—	—
Water ...	88·055	87·17	87·17	86·87	87·75	87·50	87·00	87·10
Total solids ...	11·945	12·83	12·83	13·13	12·25	12·50	13·00	12·90
Proteids ...	4·085	3·55	3·55	4·75	3·50	3·90	3·30	—
Lactose ...	4·095	4·88	4·88	4·00	4·60	4·50	4·95	—
Salts ...	·610	·71	·71	·70	·75	·70	·75	—
Total solids, not fat ...	8·788	9·14	9·14	9·63	8·85	9·10	9·00	8·80
Fat ...	3·157	3·69	3·69	3·50	3·40	3·40	4·00	4·10

It is thus seen that bulk milk contains more water and less solids, is above the average in proteids and above it in lactose, it falls short in salts, in total solids not fat, and in fat. Yet it should be better, because it is well known that the quality of the milk of *Bos Indicus* is better than of *Bos Taurus*, *i.e.*, that the milk of the hump-backed cattle is richer in quality than that of the straight-backed, with the exception of the Channel Islands cows; but of course the quantity is less.

The next comparison is of bulk milk with Indian milk, which is as follows:—

Kind of Analysis.	Ceylon Dairy Milk.	Indian Dairy Milk.
Water ...	88·055	86·13
Total solids ...	11·945	13·87
Proteids ...	4·085	3·03
Lactose ...	4·095	5·34
Salts ...	·610	·70
Solids, not fat ...	8·788	9·07
Fat ...	3·157	4·80

It is thus seen that in every respect the Ceylon milk produced by Sind cows is inferior to that of Indian milk produced by Sind cows, except that there are more proteids in the Ceylon milk.

A glance at the following table containing Mr. Cochran's 1900 analysis of Ceylon Dairy milk will at once show that Mr. Cochran's is very like the analysis of Indian milk, and not at all like 1903 Dairy milk, and we think that it must be the milk of cows recently imported from India:—

Nature of Analysis.	Bulk Milk in 1903.	Dairy Milk in 1900.
Specific gravity ...	1027·500	1030·00
Water ...	88·055	86·85
Total solids ...	11·945	13·15
Proteids and lactose ...	8·178	8·31
Salts ...	·610	·72
Solids, not fat ...	8·788	9·03
Fat ...	3·157	4·12

The next comparison is that of morning Dairy milk, Ceylon, August, 1903 (Bamber), with morning Sind cow dairy milk, India, August (Agricultural Chemist to the Government of India):—

Nature of Analysis.	Dairy Bulk Milk at 4 A.M.	Poona Dairy Sind Cow Milk at 4 A.M.
Specific gravity ...	1029·700	1031·40
Water ...	89·300	86·66
Total solids ...	10·700	13·34
Proteids ...	3·720	3·13
Lactose ...	3·370	5·31
Salts ...	·627	·71
Solids, not fat ...	7·717	9·15
Fat ...	2·983	5·19

As the milking hours of the two herds are about the same, the comparison is useful. Again, the inferiority in everything except proteids is seen, but the principal inferiority is in fat. It must be remembered that the quantity is also much less.

Now compare the evening Dairy milk, Ceylon, August, 1903 (Bamber), with the evening Sind cow dairy milk, India, August, 1893 (Agricultural Chemist to the Government of India), the cows being milked about the same time:—

Nature of Analysis.	Dairy Bulk Milk at 2 P.M.	Poona Dairy Sind Cow Milk at 2 P.M.
Specific gravity ...	1028·200	1029·70
Water ...	88·300	85·53
Total solids ...	11·700	14·47
Proteids ...	3·980	2·95
Lactose ...	3·509	5·40
Salts ...	·608	·69
Solids, not fat ...	8·097	9·04
Fat ...	3·603	5·43

It is seen that the Indian, like the Ceylon milk, is richer in the evening than it is in the morning, and this is to be expected, as the quantity is less; but, again, the Ceylon milk is inferior in every respect except proteids. The increase in proteids may perhaps be due to the artificial feeding of the cows.

The following table gives a comparison of average Dairy milk with average Colombo milk:—

Nature of Analysis	Dairy Milk.	Average Colombo Milk. (Cochran).
Specific gravity	1027·500	1031·000
Water	88·055	87·130
Total solids	11·945	12·870
Proteids and lactose	8·178	8·417
Salts	·610	·730
Solids, not fat	8·788	9·147
Fat	3·157	3·723

when it is seen to be of poorer quality than average Colombo milk in every respect.

A comparison of average dairy milk can now be made with pure milk from Sinhalese cows:—

Nature of Analysis.	Dairy Bulk Milk.	Milk from Sinhalese Cow not fed on Poonac, Cotton Seeds, or Bovinia.	Milk from Sinhalese Cow at Model Farm.
Specific gravity	1027·500	1026·50	1029·50
Cream	7·600	8·00	4·00
Water	88·055	87·39	87·66
Solids	11·945	12·61	12·34
Solids, not fat	8·788	8·69	9·72
Fat	3·157	3·92	2·62

when it is seen to be inferior in every respect to the ordinary Sinhalese cow fed on the roadsides of Colombo, but a little better in fat than one fed at the Model Farm.

A comparison of average dairy milk with buffalo milk brings out the following facts:—

Nature of Analysis.	Dairy Milk (Committee).	Village Buffalo Milk (Committee.)	Town Buffalo Milk (Cochran.)
Specific gravity	1027·500	1027·70	1027·50
Water	88·055	78·99	82·82
Total solids	11·945	21·01	17·18
Proteids and lactose	8·178	11·29	8·50
Salts	·610	·87	·82
Solids, not fat	8·788	12·16	9·32
Fat	3·157	8·85	7·86

It is thus seen that village buffalo milk is richer than town buffalo milk, and that both are much richer than Dairy milk in every respect.

An interesting comparison of the milk supplied to the General Hospital in 1888 before the Dairy was started and that supplied in 1903 from the Government Dairy shows as follows:—

Nature of Analysis.	1903. (Average.)	1888. (Mr. Cochran.)
Specific gravity	1027·900	1022·50
Water	88·250	90·73
Total solids	11·750	9·27
Lactose, casein, and albumen	7·663	5·41
Salts	·571	·37
Solids, not fat	8·235	5·78
Fat	3·508	3·49

It appears to us that there is an excessive quantity of water in the 1888 milk, especially as the salts are so very low (·37) and the total solids so low.

In general, the above tables have shown that the Government Dairy milk is inferior to other milks, but that it is pure milk and not adulterated. There is no doubt in our mind that the inferior quality is due to the artificial feeding necessitated by the poverty of the soil. It certainly is not due to any want of care on the part of the dairy authorities.

(4) *Remarks on the Milk.*—We have considered the various points of the analysis as follows:—

The Microscopical Analysis.—The milk globules are of very various sizes, and this seems to us to be of importance with regard to the cream, and to this matter we shall allude again. We have mentioned the yellow colour of the colostrum, and our opinion is that it causes the yellow colour on the strainer.

The Specific Gravity.—This has been studied by the specific gravity bottle, specific gravity balance, and the hydrometer, and we are of the opinion that its average is about 1,027, or 1,028 when corrected for temperature. It has been taken for some months at the General and Lady Havelock Hospitals. The average specific gravities of the General Hospital are as follows:—

Monthly Averages of Specific Gravity.

	Morning.	Evening.
April	1028·6	1026·1
May	1030·3	1028·8
June	1027·1	1025·0
July	1024·6	1027·4
August	1027·4	1027·2

and we are inclined to think that these are accurate.

The Lady Havelock Hospital gives a number of specific gravities at 1,036, and these, we think are too high, and we notice that the specific gravities at the Lady Havelock Hospital are uniformly higher than those of the General Hospital, and higher than our own observations. Thus, for example, August 16 :—

	Morning.	Evening.
General Hospital	1,027 ..	1,028
Lady Havelock Hospital	1,036 ...	1,030

and it is supposed to be the same bulk milk which is supplied to both institutions.

The Cream.—The cream is often used as a rough indication of the value of the milk, and for such purposes is measured in a cremometer. As an accurate indication of the real quality of the milk, it need hardly be said that it is worthless. If the quality of the milk is to be ascertained, then a simple analysis must be made, and the following facts must be ascertained :—

The percentage of water.
The percentage of total solids.
The percentage of fat.

Nothing short of this can give a proper insight into the condition of the milk.

We have investigated the cream by the cremometer and by the centrifuge, and by examining the records of the General and Lady Havelock Hospitals we are of opinion that whether a large quantity or a small quantity of cream forms depends more upon the size of the globules of fat in the milk than upon any other factor, except heat, in milk of equal richness. We have found the cream as follows :—

Fat globules mostly large	9 per cent. of cream.	
	8	do.
Fat globules mostly medium size	4	do.
Fat globules mostly very small	1	do.

and it is easy to understand that the larger the fat globule the easier it will rise to the surface. The size of the fat globule varies with the breed of the cattle. Another factor, however, of importance in the formation of cream is the temperature, as cream rises best in a falling temperature. Another factor is shaking. We caused a can of milk, after standing a little time, to be shaken, and we found that the cream adhered to the side of the can. We are of the opinion that this would be more marked in a small can than in a large one. This is one of the reasons for which we condemn the two-wheeled milk cart, as the milk is considerably shaken up in it.

The average estimate of cream in the two hospitals for certain months are as follows :—

Month.	General Hospital. Per cent.	Lady Havelock. Per cent.
April (21 days) ...	7·4 morning ... 6·8 evening ...	—
May (31 days) ...	5·5 morning 5·6 evening	5·3 morning ... 6·7 evening (29 days)
June (30 days) ...	5·8 morning 5·2 evening	... 4·8 morning (27 mornings) ... 5·6 evening (26 evenings)
July (28 days) ...	5·7 morning 5·0 evening	... 5·4 morning ... 5·5 evening
August (31 days) ...	5·9 morning 5·0 evening	... 5·9 morning ... 5·3 evening (24 days)

We are inclined to think that the creams of these hospitals are too low, as they have not stood we understand, 24 hours; in fact, we understand that they only stood about 9 hours. If a little weak formalin solution is added to the milk, it will not go sour, and the amount of cream can be read easily at the end of 24 hours. We found that, contrary to the usually accepted idea, the amount of cream had no relationship to the age of the calf, and was, as regards this fact, most irregular. This we consider to be due to the fact that, as a rule, the cow is in calf at the time it is giving the milk.

With regard to the quality of the cream, we have had it analyzed by Mr. Kelway Bamber with the following result :—

Specific gravity ·995.	Per cent.
Water	65·67
Solids	34·33
	100·00
Solids.	
Proteids and lactose	3·97
Salts	·51
Solids, not fat	4·48
Fat	29·85
	34·33

This cream was separated by means of the milk separator and came to 7 per cent., which is lower than the average. The cream is poor, and contains a much higher percentage of water than it should do. The percentage of fat is very low. The usual percentage of water in cream is from 40 to 50 per cent., and the usual amount of fat is 48 per cent. in Europe.

The Total Solids.—These are uniformly low, with the exception of analysis No. 3.

The Proteids.—The proteids in milk are caseinogen, lact-albumin, lacto-globulin, and, according to some authorities, fibrin. The most important of these are caseinogen and lact-albumin. We found the amounts to be—

	Per cent.
Caseinogen	4·35
Albumin	·11

while Brunnech in Queensland gives—

Caseinogen	3·174
Albumin	·322

The proteids appeared to be above the average in the Ceylon milk.

The Lactose.—This is nearly the average quantity.

The Ash.—The ash is extraordinary in containing so much soda and carbonic acid. But it is particularly the presence of the latter which is so extraordinary, as it is not a normal constituent of the salts of milk in any quantity, and carbonate of soda was said not to be added. The potash appears to be about right. The lime is higher than usual, and so is the magnesia. The iron is reduced to a trace. The sulphuric and phosphoric acids are markedly less than they should be. The chlorine is less than usual.

A comparison of average Dairy milk ash with various other analyses is as follows :—

Nature of Analysis.	Government Dairy.	Schoodt's Analysis.	Brunnech's Analysis, Queensland.
Potash	24·230	25·42 ...	22·310
Soda	16·305	10·94 ...	9·940
Lime	25·572	21·45 ...	22·520
Magnesia ...	7·400	2·54 ...	1·440
Ferric oxide ...	Trace	·11 ...	·040
Sulphuric anhydride ...	2·351	4·11 ...	·285
Phosphoric anhydride ...	13.220	24·11 ...	29·430
Carbonic acid ...	2·560	— ...	·390
Chlorine ...	11·789	14·60 ...	13·343

Fat.—With regard to the fat, it is somewhat below the normal as regards Europe, but more distinctly that of Sind cows in India. The fat in the morning milk is sometimes below the standard set for fat in American and European cities.

The Bacteria.—We instituted inquiries into the number of bacteria in the milk, and the following are Dr. Paul's enumerations done in the Bacteriological Institute :—

Morning Bulk Milk.

(1) 320,000 colonies per cubic centimeter.
(2) 180,000 colonies per cubic centimeter.
(3) 1,600,000 colonies per cubic centimeter.

Evening Bulk Milk.

(1) Innumerable.
(2) 20,800,000.

Individual Cow's Milk received into Sterile Tube direct.

Morning 47,000.
Evening 11,000 (very carefully taken).

These results may be compared to those of Sedgwick and Botchelder with regard to cow's milk in America. The results are as follows :—

(*a*) Cow in a clean stable and milk received into sterilized bottles, 530.
(*b*) Cow milked by a milkman into a milk pail, 30,500.
(*c*) Average, 69,143.
(*d*) Average from milk taken from Boston milk wagons, 2,355,500.
(*e*) Average from milk taken from Boston groceries, 4,577,000.

With regard to the Ceylon Government Dairy, the milk examined shows that there are far less bacteria in the morning than in the evening. (1) and (2) morning bulk milk came in sealed bottles to the Medical College, from there it was sent to the Bacteriological Institute in sterilized tubes. (3) went direct in sterilized tubes from the Dairy to the Bacteriological Institute. The increase in the bacteria in the evening must be due to the flies and the heat ; dozens of struggling flies immersed in the milk resulted in innumerable colonies of bacteria. A muslin strainer reduced the number to 20 millions. In Germany, Professor Renk found in the milk of Halle from 6,000,000 to 30,000,000 per cubic centimeter.

As regards the individual cows, the morning milk was milked into a sterilized tube by a cooly and the afternoon by one of the Committee. (1) is comparable with (*b*) and (*c*) of American list. (2) is comparable with (*a*), but shows nearly double the amount.

We are inclined to think that the strainer would diminish the bacteria, but, if possible, a sterilizer should be used and the milk sent out sterilized in bottles.

(5) *Conclusions with regard to the Milk.*—While we are fully aware that in order to make correct deductions with regard to milk some hundreds of analyses ought to be made, yet, provisionally, we conclude from the above investigations that the milk from the Sind cows in Ceylon is less in quantity and inferior in quality to that of Sind cows in India. Yet the Sind cows in Ceylon receive per pound weight a much larger quantity of richer food than in India. What is the reason for the diminished quantity and decreased quality of the milk ? We can only think of one reason, viz., that they are fed upon Mauritius grass grown upon sandy soil, and no amount of concentrated food can be made to take the place of the natural food. As we have previously remarked, the soil is more suitable for making glass than for growing grass.

We have been asked to make suggestions for improvement in the quality of the milk. We are inclined to believe that the quantity also should be increased.

Firstly.—Can the soil of the Dairy be improved? We have consulted Mr. Kelway Bamber on this point, and he is of the opinion that the plant called *Crotalaria striata* should be worked into the soil, and that then it should be treated with the following mixture:—

Mixture No. 1.

	lb.
Groundnut cake	500
Concentrated superphosphate	150
Sulphate of potash	100
Nitrate of potash	50
Total ...	800 per acre.

This mixture should be broadcasted over the grass during the showery weather, and all the cattle kept away for about a week after the application. He says that a separate application of 200 lb. per acre of the finest basic slag would also be of advantage, and tend to keep the land sweet and promote the growth of the finer grasses. With regard to the improvement of the Mauritius grass field, he says that the following mixture might be applied:—

Mixture No. 2.

	lb.
Concentrated superphosphates	150
Sulphate of potash	150
Nitrate of potash	50
Total ...	350 per acre.

This of course is an expensive and artificial way of making sand into something upon which grass can grow. But this will not improve the Racecourse, which is also to be looked upon as a useful grazing ground. If the Dairy soil is to be improved, the Racecourse soil ought also to be improved by mixture No. 1.

Finally, if this suggestion is carried out, an improved ration must be given to the cattle, and experiments must be tried to grow better grass and to try to grow Indian and other fodders in place of the Mauritius grass. Moreover, the land adjoining the Dairy must be added, to give sufficient grass.

But all this is artificial. Moreover, it must be remembered that the Dairy farm is an exceedingly valuable site, and one which is becoming more and more valuable every year, and it is on one of the worst soils for dairy purposes. Further, the Dairy buildings are inexpensive and require considerable improvements, and therefore it will not be a great loss to build a properly constructed dairy. The question naturally occurs, Cannot a more suitable place be found for the Dairy? It is useless to move it to the Model Farm, for this does not appear to us to be much better than the Dairy. We can find no place available in Colombo, consequently if it is to be moved, it must be moved outside of Colombo.

We have already pointed out the number of bacteria in the milk, and how inconvenient it is to send milk, even a short distance, in the ordinary cans. We are of the opinion that if the milk were sterilized in the Dairy before being sent out, it would travel well. Moreover, stocks of it would be kept in the various hospitals. We therefore contend that there is no objection to the distance which the Dairy is from Colombo, provided that it is near the railway line, and provided that the milk is sterilized, and that a good soil and a good pasture are made.

Moreover, we contend that with better pasture the milk ought to improve, not only in quality but in quantity, and that if a proper dairy farm was formed calves could be reared without much expense on pasture, and thus save expense in importing cows; that the concentrated food could be reduced to 1 to 6, thus saving money; that a larger institution capable of supplying all the medical institutions of Colombo and capable of providing sick persons with pure milk could be maintained at about the same cost as the present institution; that the native Sinhalese cow could be taken in hand and made to produce larger quantities of milk by careful feeding and attention and not by cross breeding.

Such a spot may possibly be found in many parts of Ceylon, but we have seen one site near Ambepussa railway station, on the banks of the Maha-oya, a piece of Government land reserved for firewood for the Railway, having excellent soil, and on which Guinea and Mauritius grasses are growing wild to the height of 10 feet, and the undupiyalis are sufficiently high to cover the boot and the et-tana is more worthy of its name. A road could be cut from this site direct to the railway station, and would only be about one mile in length. We saw the Sinhalese cattle grazing on the spot, and they were excellent looking cattle. The way to test this or any other site examined for the Dairy would be to—

(1) Analyze the soil: surface and subsoil.
(2) Experiment with the best pasture and fodder grass.
(e) See whether hay can be made.
(4) Investigate the water supply and water level at flood time.
(5) Investigate the milk of cattle fed on the site.
(6) Keep a couple of Sind cows there for a month or two and analyze the milk.

With regard to this individual site, its advantages are—

(1) It is Government land, of which there are about 700 to 800 acres in the Western Province.
(2) It has high and low lands.
(3) It is near a railway station.
(4) It is not far from Colombo.
(5) It has excellent soil.
(6) It has grasses with luxuriant foliage.
(7) The cattle there look in excellent condition.

The objections against this site are—

(1) Malarial fever.
(2) It is reserved for the Railway.
(3) Its distance from Colombo.
(4) The presence of leeches in the present jungle.

Peradeniya might show equally good sites without the objections of malarial fever, reserves, and leeches. Distance, with the sterilizer, would be no objection, as the milk would keep for any length of time without going bad.

Mr. Sturgess thinks that it is impracticable to move the Dairy out of Colombo under the present circumstances, although it might be found advantageous after considerable experiments and trials have been made.

SECTION VI.—CONCLUSIONS.

From the evidence before us we conclude that the Aden breed of cattle should be tried, if they can be obtained; that for the present the Sind breed of cattle is the best which can be easily obtained; that with the present condition of the Dairy it is cheaper and better to import and keep on importing than to try to rear Sind cattle; that under the existing circumstances it is not advisable to waste time and money in trying cross breeding; that a drier diet as set forth in the rations should be tried, and that experiments should be made with various rations to see which produces the best milk; that a large number of improvements are required at the present Dairy; that we do not think it is possible to very markedly improve the quantity or the quality of the milk in the present Dairy owing to the poverty of the soil.

We conclude that there are three possibilities before Government:—

(*a*) To do nothing and let matters go on as they are going on at present, except that the Model Farm should not be considered part of the Dairy.

(*b*) To improve the present Dairy. This will require—

(1) To improve the soil: (*a*) the Mauritius grass soil; (*b*) the sandy soil; (*c*) the Race-course soil.
(2) To increase the grass area by adding the plot suggested to the Dairy.
(3) To try experiments on grasses: (1) whether better grass than Mauritius can be grown for fodder; (2) whether a pasture can be made. We do not think it will ever be possible, even after a great outlay, to make hay on the present site.
(4) To try different rations: to attempt by giving different and calculated rations to get, if possible, to a less artificial method of feeding, and if possible to obtain better results.
(5) To improve the buildings:—
  (1) Provide a milk room.
  (2) Separate the Manager's house from the Dairy.
  (3) Build a house for the Superintendent, so that supervision may be improved.
  (4) Cement the courtyards and cover them with sand.
  (5) Provide more water taps.
  (6) Make a proper storeroom.
  (7) Provide a drinking trough.
  (8) Provide a manure receptacle.
  (9) Provide a pump capable of emptying the sewage tank.
  (10) Repair the present buildings.
  (11) The Public Works Department to be put in charge of the buildings.
(6) To improve the apparatus:—
  (1) Provide new cans.
  (2) Provide a better milk cart.
  (3) Provide a sterilizer for the milk.
  (4) Provide a chaffing machine.
  (5) Provide a machine for crushing the cotton seed if it can be obtained.
  (6) Provide a boiler for producing boiling water to scald the cans.
(7) To study the milk carefully:—
  (1) A cream and specific gravity register should be kept and observations on bulk milk made daily and on individual cows from time to time.
  (2) Simple analysis of the bulk milk to be made at least twice a month from the morning and the evening milk for at least a year, so that the variations of the milk may be known.
  (3) That a few analyses be made of the (*a*) salts, (*b*) cream, in order to see whether the present analyses represent the average milk.

(*c*) To move the Dairy. That after careful consideration a piece of available land near the main line of the railway be selected and experiments made and the following points investigated:—

(1) Analyses of the soils.
(2) Experiments with good grasses.
(3) Investigation of water supply.
(4) Trial of Sind cattle on the selected patch.
(5) The production of a pasture and the growth of fodder grasses.
(6) Again, the trial of some of the cattle on the pasture and the fodder produced.
(7) The erection of a model dairy on modern lines.
(8) The milk to be sterilized and sent by rail to destination.
(9) The whole institution to be put under the supervision of an agriculturally trained man.
(10) To try to improve Sinhalese cattle, as in such an institution it would possibly be cheaper to rear than to import cattle.

We have carefully considered these points, and we are of the opinion that the Government of Ceylon should possess a dairy which should be a model to the inhabitants of the Island, and that to let matters alone is not to be advised. We consider possibility (*b*) as too expensive. We are of the opinion that possibility (*c*) done after due consideration and with care is the best and cheapest, for the whole cost of the experiment, the new buildings, the removal, and even if necessary the purchase of land, though we would rather advise that available Government land be used, could be met by selling portions of the Model Farm and of the Dairy land, both of which are extremely valuable and increasing yearly in value as building lots.

We consider that the suggestions contained in this report should be subjected to the experimental tests indicated therein, in order to see whether they work satisfactorily in practice, and we feel that upon these, or upon such lines as the experiments may finally indicate, the Dairy should progress year by year.

SECTION VII.—SUMMARY.

We are of the opinion that the main fault of the Dairy is the poverty of its soil, and that this soil cannot be improved without a very heavy expenditure, and that Government should seriously consider the advisability of moving the Dairy to some more suitable locality and of making a model dairy.

September 26, 1903.

ALBERT J. CHALMERS,
G. W. STURGESS,
SOLOMON SENEVIRATNE,
} Dairy Committee.

DISSENT BY MR. G. W. STURGESS.

1.—MILK.

I DISSENT from the comparisons and conclusions on pages 25 and 26 of the report made to the disparagement of the Dairy bulk milk.

From the very limited analyses of bulk milk no fair and correct average could be calculated, neither can the average composition of Dairy bulk milk (a mixture from forty-six cows) as made from eight odd analyses be compared with the outside analyses quoted, which are not made under equal conditions.

Some are certainly quite impossible; for example, "the average Colombo milk" taken from Mr. Cochran's Manual. Mr. Cochran says: "The following is the composition of *eight* samples of Colombo cow milk believed to be genuine" (odd analyses, and not bulk milk from a herd of forty-six cows); and again, the milk supplied to the General Hospital in 1888, also quoted from Mr. Cochran's book, and he says in connection with this: "The following are a few more analyses of Colombo milks," and referring to this analysis in particular says: "From its composition the milk was mainly buffalo milk watered to a considerable extent."

Buffalo milk and cow milk have a very different standard, and the analyst's remark should be included with the analysis where the true value of the comparison is apparent.

Instead of holding the opinion that the Government Diary bulk milk is inferior in any respect to other milks in Colombo, I believe it to be equally good, if not better.

Before any comparison could be made other milk must be examined under equal conditions. Individual cow milk varies in a very great degree in its composition, and cannot be compared to average bulk milk from a herd of forty-six cows.

The average made by the Committee from eight odd analyses of Dairy bulk milk shows it to correspond very closely to the standards laid down by certain authorities with which it is compared on page 25.

Again, in "solids not fat" and in "fat"—the two constituents taken as the standard in "The Sale of Food and Drugs Acts" in England, which must be 8·5 per cent. and 3 per cent. respectively—the average Dairy bulk milk, showing 8·788 per cent. and 3·157 per cent. respectively, comes above the standard, and is therefore, according to the law in England, milk of good quality.

2.—CREAM.

I also dissent from the conclusion that the cream is of a poor quality (page 27). The analysis given in the report made by Mr. Bamber is not a poor analysis, but a good one. It shows water 65·7 per cent. and fat 29·85 per cent., and such is not poor according to European standards. Dr. Wanklyn (the only authority I have at hand) in his book on Milk Analysis gives analyses of six samples of cream raised by himself, and which he carefully states to be genuine creams, compared as follows:—

	Government Dairy Samples.	Dr. Wanklyn's.					
		1.	2.	3.	4.	5.	6.
Water	65·07	72·20	71·02	66·36	60·17	53·62	50·00
Fat	29·85	19·00	14·01	18·87	33·02	38·17	43·90

No. 6, he says, was "a very thick cream." The Dairy cream, therefore, just comes in the middle, and I therefore dissent from the conclusion with reference to it on page 27.

My opinion is that after the limited examination of the milk and the cream by the Committee both compare very favourably with standards laid down by authorities and are of good quality, and that disparaging comparisons with isolated analyses are of no value.

G. W. STURGESS, M.R.C.V.S.

III.—1904.

STATEMENT AND ACCOUNT

OF THE

WIDOWS' AND ORPHANS' PENSION FUND

FOR THE YEAR

1903.

(Prepared in terms of Section 6 of Ordinance No. 1 of 1898.)

Ordered by His Excellency the Governor to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 10 cents.

1904.

WIDOWS' AND ORPHANS' PENSION FUND.

STATEMENT and ACCOUNT for the Year ended December 31, 1903.

(Prepared in terms of Section 6 of Ordinance No. 1 of 1898.)

I.—POSITION OF THE FUND.

THE balance to the credit of the Fund in the hands of the Colonial Treasurer on December 31, 1903, was Rs. 3,577,011·70.

Table showing the receipts and expenditure for each month of the year, with resulting balances, viz.:—

Month.	Receipts. Rs. c.	Expenditure. Rs. c.	Receipts over Expenditure. Rs. c.	Expenditure over Receipts. Rs. c.
January	19,109 39	34,080 67	—	14,971 28
February	14,068 96	3,098 78	10,970 18	—
March	18,150 64	10,627 81	7,522 83	—
April	17,334 15	5,817 95	11,516 20	—
May	16,498 74	2,559 66	13,939 8	—
June	20,038 54	10,102 28	9,936 26	—
July	21,025 73	5,939 69	15,086 4	—
August	18,465 59	2,559 63	15,905 96	—
September	15,641 56	18,765 69	—	3,124 13
October	19,566 20	6,523 62	13,042 58	—
November	18,439 9	3,155 24	15,283 85	—
December	221,905 13	9,788 4	212,117 9	—
Total	420,243 72	113,019 6	325,320 7	18,095 41
		Deduct Expenditure over Receipts	18,095 41	
		Nett Profits	307,224 66	
		Add balance on December 31, 1903	3,269,787 4	
			3,577,011 70	

Classification of Receipts and Expenditure during the Year.

	Rs. c.		Rs. c.
By Abatement	216,896 41	To Pensions	94,460 61
Refunds of unpaid pensions	3,254 75	Refunds of excess and erroneous payments	398 44
Receipts from Government on account of amount paid for exchange compensation	159 96	Payments on account of exchange compensation	159 96
Receipts from Government on account of refunds made to officers who served on agreements	1,038 26	Refunds to bachelors	9,799 67
Interest	198,894 34	Salaries, &c.	7,162 12
		Refunds to officers who served under agreements	1,038 26
			113,019 6
		Balance	307,224 66
Total	420,243 72	Total	420,243 72

II.—CONTRIBUTORS.

The number of contributors on January 1, 1903, was	4,419
Joined during the year	325
Making a total of	4,744

Number of Members who ceased to contribute.

By Death	78	
Dismissal	23	
Resignation	17	
Being discontinued from office	21	
Being disqualified	5	
Attaining 65 years of age	7	
Exemption under proviso to section 11 of Ordinance No. 1 of 1898	1	
		152
Number of members on December 31, 1903		4,592
Showing an increase over last year of		173

III.—PENSIONS.

The number of pensioners on January 1, 1903, was	...	538
Pensions awarded in 1903	...	69
Total	...	607
Less pensions lapsed during the year	...	15
Number of pensioners on December 31, 1903	...	592

Seventy-eight deaths were reported during the year under review, viz.:—

1. Bachelors	...	8
2. No application for pension	...	1
3. Pensions awarded	...	69

The following are the cases in which pensions have been awarded, viz.:—

Name.	Name and Designation of Officer.	Yearly Pension. Rs. c.	Date of Commencement of Pension.
			1903.
Eliza, widow of	John Couzens, Bridge Inspector, Ceylon Government Railway	457 60 ...	January 6
Emily Victoria, widow of	P. H. F. Perera, Retired Clerk, Survey Department...	52 0 ...	January 16
			1902.
Georgiana Eleanore, widow of	R. A. Koelmeyer, Retired Secretary, District Court, Kegalla	84 17 ...	December 5
Children of	A. G. Maartensz, Retired Medical Officer ...	24 47 ...	November 30
Maria Namis, widow of	Croospulle, Retired Police Constable No. 366 ...	17 78 ...	December 3
Maria Elizabeth, widow of	G. A. J. Fernando, Dismissed Clerk, Post Office ...	35 39 ...	November 11
Sarah Elizabeth, widow of	William Blair, Retired Inspector of Schools ...	93 0 ...	October 17
			1903.
Alice Margaret, widow of	G. F. Kellar, Retired Customs Officer ...	76 98 ...	January 30
Child of	G. P. Banda, Retired President, Village Tribunals, Matale East	87 77 ...	February 12
			1902.
Leno Hamy, widow of	Joronis Appu Juanis, Police Constable No. 808	34 49 ...	April 29
Children of	J. H. Meerwald, Retired Chief Clerk, Batticaloa Kachcheri	150 95 ...	1903. January 16
Child by first marriage and Alice Clara, widow of	William Barber, Salt Supervisor, Karaittivu ...	44 39 ... 38 61 ...	November 28
Theivani Amma, widow of	M. Eliatamby, Assistant Colonial Surgeon ...	490 97 ...	1902. January 20
Ramasi, widow of	M. Rengasamy, Retired Police Constable, No. 111 ...	12 41 ...	December 8
			1903.
Helen Swinnie, widow of	R. Scotland, Engine Driver, Ceylon Government Railway	401 35 ...	March 15
Sarchi, widow of	G. de Fonseka, Retired Clerk, Registrar's Office ...	40 42 ...	February 10
Pricilla Matilda, widow of	E. J. Barsenbach, Retired Chief Clerk, Police Court, Balapitiya	46 8 ...	March 29
Selestinahamy, widow of	B. Bernard, Retired Police Constable No. 1,545 ...	2 26 ...	January 10
Ursula, widow of	E. S. Direcksz, Retired Clerk, Kandy Kachcheri ...	127 6 ...	April 11
			1901.
Catherine, widow of	Sinaris de Silva, Conductor, Henaratgoda Gardens ...	86 45 ...	September 21
			1903.
Meenatchie, widow of	Arumugam, Retired Police Constable No. 1,261 ...	10 99 ...	January 3
Rosalind Mary, widow of	E. W. Perera, Clerk, &c., Survey Department ...	111 25 ...	February 6
Emily Harriet, widow of	J. J. Casie Chitty, Retired Police Magistrate, Panadure	128 73 ...	March 24
Sivagami, widow of	C. Chittamperapillai, Retired Clerk Public Works Department	115 21 ...	April 25
Ramahie, widow of	P. Kandan, Retired Police Constable No. 632 ...	15 89 ...	January 20
Children by first marriage and Clara Alice, widow of	D. P. Ratnaike, Clerk, Registrar's Office ...	78 2 ... 67 74 ...	May 17
Orrie Emma, widow of	C. B. Kumarakulasinghe, Mudaliyar, Tamil Interpreter to His Excellency	518 48 ...	June 6
Annie, widow of	Edward Strong, Retired Resident Engineer, Ceylon Government Railway	332 20 ...	April 23
Leyi Nona, widow of	P. J. Cooray, Postmaster, Beruwala... ...	142 60 ...	May 1
Amelia Matilda, widow of	M. T. Soertsz, Reader, Government Printing Office....	121 90 ...	May 31
Atchimuttu, widow of	A. Namasivayam, Overseer, Anuradhapura Prisons ...	62 15 ...	April 3
Eliza Cornelia, widow of	E. W. Vandort, Retired Police Sergeant ...	4 57 ...	February 28
Emma, widow of	P. W. Conolly, Retired District Judge, Jaffna ...	1,123 20 ...	June 10
			1902.
Dingiri Menika, widow of	P. B. Tennekoon, Vaccinator, Medical Department ...	45 0 ...	May 22
			1903.
Children by first marriage and Matilda Bertha, widow of	P. F. Solomons, Retired Assistant Colonial Surgeon	130 53 ... 101 72 ...	July 15
Ponnu, widow of	S. Appacutty, Mudaliyar, Retired Shroff, Batticaloa Kachcheri	64 68 ...	July 5
Harriet Adelaide, widow of	T. E. Morgan, Sub-Assistant Colonial Surgeon ...	268 48 ...	July 11
Tankam, widow of	S. Ponnampalam, Salt Storekeeper, Hambantota ...	140 2 ...	June 14
Dona Robertina, widow of	D. A. Perera, Teacher, Beruwala	158 98 ...	August 9
Children of	G. N. Wickramanayake, Clerk, Matara Kachcheri ...	90 77 ...	June 11
Louisa Maria, widow of	E. L. Pieris, President, Village Tribunal, Retired ...	112 83 ...	August 11
Elizabeth, widow of	A. Barnett, Retired Landing Supervisor, Government Stores	42 83 ...	August 10
Amelia, widow of	J. A. Herft, Retired Chief Clerk, Police Court, Jaffna	42 60 ...	August 26
Caderai, widow of	Iyasamy, Retired Police Constable No. 1,217 ...	23 39 ...	August 21
Dona Maria, widow of	D. M. de Silva, Retired Translator, Fiscal's Office, Kandy	16 46 ...	September 10
Ann Catherine, widow of	F. W. Tillekeratne, Retired President, Village Tribunal, Hinidum pattu	58 77 ...	September 25

Name.	Name and Designation of Officer.	Yearly Pension. Rs. c.	Date of Commencement of Pension.
			1903.
Anges Mary, widow of	J. W. Dearman, European Police Constable No. 34 ...	119 4	... September 13
Satna Hamy, widow of	Andris Appu, Police Constable No. 666 ...	28 81	... May 19
Harriet Matilda, widow of	A. F. Vandendriezen, Post and Telegraph Master ...	220 2	... September 22
Eliza Joseline, widow of	H. A. de Boer, Retired Head Clerk, Medical Department	103 67	... October 20
Annie, widow of	P. Bastiansz, Retired Police Sergeant No. 99 ...	9 50	... June 3
Josephine Laura, widow of	R. D. Vandort, Retired Timekeeper, Harbour, Works	71 44	... November 4
Lydia Maud, widow of	G. E. Anthonisz, Retired Post and Telegraph Master	271 31	... November 3
Georgiana Maria, widow of	G. R. Meyer, Retired Police Sergeant No. 51 ...	22 10	... October 19
Children of	A. Carron, Retired Station Master	224 32	... October 15
Susan Eleanor, widow of	J. G. Weinman, Retired Head Clerk, Audit Office ...	131 44	... November 14
Leno Hamy, widow of	John Fernando, Retired Police Constable No. 1,219...	8 31	... May 1
Emelia Maria, widow of	A. P. Weerasinghe, Retired Sorter, Post Office ...	139 12	... October 5
Parwathie, widow of	Ramen, Police Constable No. 216 ...	35 10	... October 24
Dona Harriet, widow of	R. Ehaliyagoda, Retired President, Kegalla District ...	218 24	... February 14
Kamatchy, widow of	S. Muttiah, Clerk, General Post Office ...	108 54	... August 20
Children of	D. J. de Fonseka Abeykoon, Retired Mudaliyar ...	87 54	... October 21
Children of	Alvino Fernando, Retired Clerk, Colombo Kachcheri	43 8	... October 20
Mary Anne Eliza, widow of	F. Keyt, Retired Colonial Surgeon ...	727 24	... December 18
Arabella, widow of	R. Massie, Retired District Judge, Kurunegala ...	1,022 14	... December 22
Dona Selestina, widow of	B. A. Navaratne, Interpreter, District Court, Puttalam	50 79	... August 11
Sinnatangam, widow of	J. Chelliah, Clerk, Fiscal's Office, Batticaloa ...	35 77	... December 26
Eliza Evangeline, widow of	K. J. Pohath Kebelpannala, Mudaliyar, Interpreter, District Court, Kandy, Retired ...	91 42	... December 27
Jenny Beatrice, widow of	Thomas Clarke, European Police Sergeant ...	175 70	... December 9

The following comparative statement gives particulars for the years 1884 to 1903, viz.:—

(1) The receipts, expenditure, and the nett receipts for each year; and

(2) The amount to credit of the Fund, and the number of contributors and pensioners at the end of each year.

H. HAY CAMERON,
H. L. MOYSEY,
H. T. S. WARD,
P. RAMANATHAN,
E. DE KRETSER,
} Directors.

Colombo, January 25, 1904.

Comparative Statement of Receipts and Expenditure from 1884 to 1903.

Receipts.	May to December, 1884.	1885.	1886.	1887.	1888.	1889.	1890.
	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
Abatements from Salaries	31,883 65	64,522 73	86,242 32	86,645 48	94,737 46	100,583 17	105,672 41
Interest... ...	583 75	5,793 70	9,219 72	13,869 87	19,416 51	25,716 86	32,415 16
Fines	—	150 0	—	2 0	1 0	4 0	1 0
Refunds ...	—	—	15 53	—	979 72	563 6	685 46
	32467 40	70466 43	95,477 57	100,517 35	115,134 69	126,867 9	138,774 3
Expenditure.							
Pensions paid ...	108 59	1,701 95	5,656 63	7,670 50	10,307 23	12,812 47	16,779 71
Refunds ...	205 92	798 90	552 77	499 39	646 41	1,267 9	966 27
Office Salaries, Contingencies, &c. ...	119 34	68 5	755 56	1,467 13	1,447 97	1,561 83	1,688 58
	433 85	2,568 90	6,964 96	9,637 2	12,401 61	15,641 39	19,434 56
Annual Receipts over Expenditure ...	32,033 55	67,897 53	88,512 61	90,880 33	102,733 8	111,225 70	119,339 47
Balance to credit of the Fund at the end of the year ...	32,033 55	99,931 8	188,443 69	279,324 2	382,057 10	493,282 80	612,622 27
Contributors.							
Number of Contributors	1,075	1,144	1,545	1,606	1,925	2,195	2,365
Number of Pensioners ...	—	16	30	50	64	86	102

Comparative Statement, &c.—*continued.*

Receipts.	1891.	1892.	1893.	1894.	1895.	1896.	1897.
	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
Abatements from Salaries	114,305 35	124169 73	135,537 6	150,813 25	174,674 90	177,873 39	184,378 83
Interest... ...	39,814 40	48,003 89	56,973 62	67,780 29	78,397 44	90,887 86	104,432 12
Fines	—	10 0	5 0	253 0	109 0	26 0	1 0
Refunds ...	748 40	1,314 42	1,188 27	1,674 91	1,698 45	2,916 9	2,664 91
	154,868 15	173,498 4	193,703 95	220,521 45	254,889 79	271,703 34	291,476 86
Expenditure.							
Pensions paid ...	19,380 93	21,808 16	28,398 88	34,396 65	42,470 21	40,943 80	44,311 82
Refunds ...	909 55	422 49	494 74	3,752 89	2,312 32	1,442 29	3,136 44
Office Salaries, Contingencies, &c. ...	1,810 94	2,139 18	2,296 42	3,329 72	3,547 99	4,380 54	4,195 80
	22,101 42	24,369 83	31,190 4	41,479 26	48,330 52	46,766 63	51,644 6
Annual Receipts over Expenditure ...	132,766 73	149,128 21	162,513 91	179,042 19	206,549 27	224,936 71	239,832 80
Balance to credit of the Fund at the end of the year	745,389 0	894,517 21	1,057,031 12	1,236,073 31	1,442,622 58	1,667,559 29	1,907,392 9
Contributors.							
Number of Contributors	2,403	2,471	2,594	3.078	3,498	3,548	3,675
Number of Pensioners ...	127	155	172	212	252	289	323

Receipts.	1898.	1899.	1900.	1901.	1902.	1903.
	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
Abatements from Salaries	193,228 18	201,950 41	209,305 66	209,193 50	214,508 26	216,896 41
Interest... ...	118,962 72	133,604 1	149,757 97	164,591 58	181,799 50	198,894 34
Fines	15 0	2 0	—	—	—	—
Refunds ...	9,265 6	5,485 17	3,340 54	4,943 36	4,105 85	4,452 97
	321,470 96	341,041 59	362,404 17	378,728 44	400,413 61	420,243 72
Expenditure.						
Pensions paid ...	62,298 85	58,172 13	75,702 85	84,371 43	85,906 65	94,460 61
Refunds ...	10,048 31	5,858 75	12,972 21	3,705 43	7,801 72	11,396 33
Office Salaries, Contingencies, &c. ...	4,188 49	4,751 26	*6,626 94	†14,246 25	5,012 55	‡7,162 12
	76,535 65	68,782 14	95,302 0	102,323 11	98,720 92	113,019 6
Annual Receipts over Expenditure ...	244,935 31	272,259 45	267,102 17	276,405 33	301,692 69	307,224 66
Balance to credit of the Fund at the end of the year	2,152,327 40	2,424,586 85	2,691,689 2	2.968,094 35	3,269,787 4	3,577,011 70
Contributors.						
Number of Contributors	3,916	4,039	4,117	4,257	4,419	4,592
Number of Pensioners ...	369	417	454	493	538	592

* Includes a sum of Rs. 2,258·82 paid to Actuaries. † Includes a sum of Rs. 9,612·84 paid to Actuaries.

‡ Includes a sum of Rs. 2,241·24 paid to Actuaries.

IV.—1904.

REPORT ON THE SURVEY

OF THE

PROPOSED EXTENSION TO PELMADULLA OF THE RATNAPURA RAILWAY.

By J. PHILLIMORE, Esq.

Chief Resident Engineer, Kelani Valley Railway.

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the Government Record Office, Colombo, price 15 cents.

1904.

RATNAPURA-PELMADULLA RAILWAY EXTENSION.

REPORT.

Preliminary.—In May, 1903, His Excellency the Governor Sir West Ridgeway ordered that, when the survey of the proposed railway between Avisawella and Ratnapura was completed a flying survey should be run from Ratnapura to Pelmadulla, in order that a rough estimate of the cost of an extension to Pelmadulla might be framed.

The Committee appointed to collect traffic statistics relating to the Ratnapura Railway were also requested to report on the extra traffic that would be likely to be brought to the Ratnapura Railway if it were extended to Pelmadulla, and this information was included in their report for the probable traffic of the Ratnapura Railway presented to Government on 30th October, 1903.

Remarks on Survey.—The survey was commenced in July, 1903, and was under the charge of Mr. L. G. Northway, who has shown zeal and skill in the conduct of this survey, carried out in difficult country and under unfavourable conditions as regards weather.

A traverse line was first run with the magnetic compass and a section taken along the traverse line, and cross sections were taken at intervals with an Abney's level; the traverse line and contour lines were then plotted, a centre line laid down on paper, and a longitudinal section of the centre line computed from the cross sections. The earthwork quantities have been calculated from the cross sections. Pegs have been driven and small cairns of stones erected at each of the angle points on the traverse, but the centre line of railway has not been staked out.

General Location.—Leaving Ratnapura station the line runs parallel with the Inner Circular road for about half a mile, and then crosses the same and runs alongside the public road, through a cutting, from 0 miles 40 chains to 0 miles 50 chains, and then diverges from the public road, past the temple Suddharma Salawa, and from 1 mile 20 chains to 3 miles 0 chains runs between the Malwala road and the Kalu-ganga. Malwala station is located at 2 miles 70 chains. This will be the station for the Hapugastenna group of estates.

The Kalu-ganga is crossed at 3 miles 7 chains by a girder bridge, 3 spans of 100 feet,* and the line then runs for a short distance parallel with the Kalu-ganga until opposite its junction with the Denawaka-ganga, and then runs parallel with the latter river and on the south side of it to 10 miles.

It is probable that when the railway is constructed from Avisawella to Ratnapura a road bridge will be built over the Kalu-ganga at Malwala to enable the traffic from the Hapugastenna estates to cross the Kalu-ganga without having to be unloaded on to boats and again loaded into carts on the Ratnapura side of the river. If this is done there is little doubt that the present trace to the south of the Denawaka-ganga is the best, but if no road bridge is built over the river at Malwala previous to the construction of the Pelmadulla extension it is a question as to whether the trace should not be taken on the north side of the Denawaka (crossing between 10 miles and 14 miles), in order that Malwala station might be located on the north, or Hapugastenna side, of the Kalu-ganga. Before deciding on the alignment to be adopted, an alternative trace should be run on the north of the river and comparative estimates prepared, and a careful survey should also be carried out before definitely fixing the site of the Kalu-ganga bridge as well as that of Malwala station.

On a trace to the north of the Denawaka two bridges would be necessary, viz., over the Kalu-ganga and over the Denawaka-ganga, instead of one, as on the present alignment, over the Kalu-ganga only, and there would also appear to be a good deal of drainage from the neighbouring hills, and consequently more waterways necessary to be provided on the trace to the north of the river than on the existing trace to the south of the river.

It is important that free access should be provided to Malwala station for Hapugastenna and the country north of Malwala without having to cross the Kalu-ganga by boats, so that if it is not found desirable to take the trace to the north of the Denawaka-ganga a road bridge should be built over the Kalu-ganga at Malwala.

From 4 miles 50 chains to 9 miles 40 chains the line rises 266 feet, viz., from 213 feet reduced level to 479 feet reduced level. At 10 miles the trace leaves the river and takes a southerly direction towards the public road, which it crosses at 10 miles 66 chains, and for the remainder of the distance into Pelmadulla, from 10 miles 66 chains to 15 miles 20 chains, it keeps parallel to the road and on the south side of it.

Pelmadulla station is situated at the junction of the Rakwana and Balangoda roads, close to the bungalow belonging to the Public Works Department.

Mileage, Distances, &c.—The fixed point from which the mileage is reckoned is opposite the south end of the passenger platform of the proposed Ratnapura station. The line terminates at Pelmadulla, the length of the line from the east end of the passenger platform at Ratnapura to the buffer stops at the east end of Pelmadulla station, being 15 miles 20 chains, which is taken as the length of the railway for the purposes of the estimate.

---

* It may be advisable to have a somewhat longer piece of straight on each side of the bridge than is shown on the plan.

The distance from Ratnapura to Pelmadulla is 3¼ miles longer than by road, but the steepest gradients on the railway are 1 in 70, as against 1 in 15 on the road. The reduced level of formation in Ratnapura station is 176·00, and in Pelmadulla station 495·00; thus the difference of level between Ratnapura and Pelmadulla stations is 319 feet. The datum for levels has been taken the same as the datum of the Kelani Valley Railway and of the Ratnapura Railway, viz., 100 feet below mean sea level.

The whole of the line is in the Province of Sabaragamuwa.

Gauge.—The gauge of the railway will be 2 feet 6 inches, the same as the gauge of the Kelani Valley Railway and the Ratnapura Railway.

Gradients, Curves, &c.—The sharpest curves are of 16° angle of curvature, or 3·59 chains radius, and the heaviest gradient is 1 in 70 (·943 feet per chain), no compensation being allowed for curves. Taking the resistance due to curves at ·02 per cent. per degree of curvature, the maximum resistance due to curve and gradient combined is 1·75 per cent., equivalent to a ruling gradient of 1 in 57 on the straight.

The following table shows the limiting curves and gradients on the Kelani Valley Railway, Ratnapura Railway, and Pelmadulla Railway, respectively, and the maximum resistance due to combined curve and gradient on each railway :—

Name of Railway.	Limiting Curve.		Ruling Gradient.		Resistance per Cent. due to Curve.	Maximum Resistance due to combined Curve and Gradient.	Equivalent to a ruling Gradient of	Remarks.
	Angle of Curvature.	Radius Chains.	Gradient.	Resistance per Cent. due to Grade.				
Kelani Valley ...	16°	3·59	1 in 80	1·25	·32	1·57	1 in 64	No compensation allowed on curves
Ratnapura ...	16°	5·73	1 in 100	1·00	—	1·00	1 in 100	Compensation allowed on curves
Pelmadulla ...	16°	3·59	1 in 70	1·43	·32	1·75	1 in 57	No compensation allowed on curves

On the Ratnapura Railway compensation was allowed for curvature, but it has not been possible to do this on the Pelmadulla extension on account of the continued upward gradient between 4 miles 50 chains and 9 miles 50 chains. The ruling gradient of 1 in 70 is in the direction of Pelmadulla; towards Ratnapura from Pelmadulla the ruling gradient is 1 in 200.

Estimates and Cost.—The total estimated cost of the railway, including rolling stock and all equipment, amounts to Rs. 2,262,649; and the length of the line being 15·25 miles, the rate per mile will be Rs. 148,370. It should, however, be borne in mind that the centre line of railway not having been staked out, the estimate is only a rough one, and that when the line has been staked out in detail future estimates may show a considerable difference from the present rough estimate.

The rate per mile of the Ratnapura Railway, from Avisawella to Ratnapura, was Rs. 108,450; thus the estimated rate per mile of the Pelmadulla extension exceeds the estimated rate per mile of the Ratnapura Railway by Rs. 39,920. The estimate of the Pelmadulla extension has been prepared on the assumption that the line would be constructed at some period subsequent to the completion of the line from Avisawella to Ratnapura.

If the whole line from Avisawella to Pelmadulla were constructed at one time, the cost of the whole line would be somewhat reduced, as in that case only one engine shed and turntable, with other buildings and machinery necessary for a terminal station, would be required, viz., at Pelmadulla, instead of, as at present provided in the estimates of the Ratnapura Railway and the Pelmadulla extension, both at Ratnapura and at Pelmadulla.

The excess of cost of the Pelmadulla extension over that of the Ratnapura Railway is accounted for by the greater cost of "Earthwork" and "Bridges and Culverts," the cost of which items (especially of "Bridges and Culverts") is very heavy, owing to the nature of the country through which the line has necessarily to pass.

Except in the case of "Land and Compensation," "Felling Trees and Clearing Land," "Electric Telegraph," and "Engineering and Administration" (all of which have been estimated at a mileage rate), 5 per cent. has been added for contingencies to each head to cover any extra expenditure which may be necessary under that head. 5 per cent. for contingencies has also been allowed, in the General Abstract, on the total amount of the estimate, which sum is intended to cover any extra expenditure, such as interest on loan, loss on exchange, or other charges or liabilities which may be incurred, and which are not covered by the main heads of the estimate.

The estimate of cost is given on page 4.

Land and Compensation.—The area of land per mile and the rate per acre are taken the same as in the Ratnapura Railway estimates.

Felling Trees and Clearing Land.—The rate per acre for felling trees and clearing land is taken the same as in the Ratnapura Railway estimates.

Earthwork in Formation of Banks and Cuttings.—The widths and slopes of banks and cuttings and the rates per cubic yard are taken the same as in the Ratnapura Railway estimates, and the definitions of soils are similar to those given in the Appendix of the Ratnapura Railway estimates, but only 6 chains lead has been allowed, viz., from 3 chains of cutting to 3 chains of bank.

The cost of lead, of turfing slopes and pitching to banks, and of retaining walls has been included in the rates for earthwork, as also the cost of maintenance and final dressing of banks and cuttings.

The probable nature of the soil in banks and cuttings has been judged from surface indications only.

In consequence of the sidelong nature of the ground the quantities of earthwork, as calculated from the cross sections, are heavier than they would appear if judged from the longitudinal section only.

Bridges.—The bridges will be of the same type as those on the Ratnapura Railway, and the rates for work are similar. The high cost of bridges is due to the large number required and the great height of the bridges necessary, but possibly in this respect an improvement may be made on the final alignment.

Culverts.—The culverts are also of similar design to those on the Ratnapura Railway, except that no pipe drains have been allowed; the rates are the same as those for the culverts on the Ratnapura Railway. The high cost of culverts is due to the height of the banks on the first 10 miles and the large number of irrigation openings necessary on the last 5 miles.

Roads and Level Crossings.—A detailed estimate has not been prepared for this item, but a lump sum has been taken at the same rate per mile as that in the Ratnapura Railway estimates.

Ballast.—The estimates provide for a width of ballast at rail level of 6 feet with $1\frac{1}{4}$ to 1 slope and a depth of 6 inches of ballast under the sleepers; the rates are the same as in the Ratnapura Railway estimates.

Permanent Way.—The estimates provide for permanent way similar to that of the Kelani Valley Railway, viz., steel rails weighing $46\frac{1}{4}$ lb. to the lineal yard on jarrah sleepers 5 ft. by 9 in. by $4\frac{1}{2}$ in. Karri sleepers should not be used.

The rates for ballast and permanent way are taken the same as in the Ratnapura Railway estimates, but the cost per mile of through line is less on account of the total length of sidings on the Pelmadulla extension being proportionately less than the total length of sidings on the Ratnapura extension, and the rate per mile of actual track laid is also slightly less owing to the smaller number of switches and crossings and crossing sleepers required.

Stations and Buildings.—The following is a list of stations :—

Names of Stations.	Distance from Ratnapura. Miles.	Distance from Colombo. Miles.
Ratnapura	—	$63\frac{3}{4}$
Malwala	3	$66\frac{3}{4}$
Pelmadulla	$15\frac{1}{4}$	79

At Ratnapura station provision has been made in the estimates for widening the platform and for providing an additional tank and water column.

Malwala station will be of similar design to Kendangamuwa station on the Ratnapura Railway, and a passenger station building, goods shed 30 ft. by 15 ft., and a set of platelaying coolies' lines are provided.

At Pelmadulla the following are provided :—One goods shed 90 ft. by 25 ft., an engine shed 60 ft. by 25 ft., an engine turntable, coal stage and water tank, and three residences and fourteen rooms of coolies' lines for the Traffic, Locomotive, and Ways and Works Departments.

A set of platelaying coolies' lines (six rooms) is also provided at every 3 miles distance between stations.

Electric Telegraph will be supplied and erected by the Postmaster-General; the estimate is taken at the same rate per mile as on the Ratnapura Railway.

Plant.—The estimates cover the cost of plant required for construction as well as the cost of furniture and unconsumable stores to be provided for the Ways and Works, Traffic, Locomotive, and Accountant's Departments for working the railway.

Rolling Stock.—The estimates provide for rolling stock in accordance with the requirements of the General Manager.

Engineering and Administration.—The cost of engineering and administration is taken at a somewhat higher rate than on the Ratnapura Railway in consequence of the difficult nature of the country.

The cost of the present flying survey has been charged to the Ratnapura Railway, but it will be necessary to make a detailed survey of the Pelmadulla extension before commencing the construction of the line.

Labour and Materials.—There should be no difficulty in procuring suitable labour for the construction of the railway, especially if this is put in hand immediately after the construction of the Ratnapura Railway. Building stone and ballast are obtainable along the line.

Traffic and Profit or Loss to be expected.—The gross proceeds are estimated at Rs. 106,328 per annum and the working expenses at Rs. 61,240, giving a profit of Rs. 45,088 per annum. The interest and sinking fund, however, amount to Rs. 90,506, so that the probable nett loss per annum would be Rs. 45,418.

The General Manager states that the estimate for working expenses is based on an average for the first ten years after the opening of the line, and includes renewal of sleepers and rails. If calculated on the average of the first four years, there would be a reduction of Rs. 7,935 of the working expenses, which would increase the gross profits to Rs. 53,023 per annum, and leave a nett loss per annum of Rs. 37,483, after deducting interest and sinking fund.

If the whole length of line were constructed, from Avisawella to Pelmadulla, there would probably not be sufficient inducement for boats to remain on the river, and the whole traffic of the district would probably then be secured by the railway. The estimate of profit or loss is given on page 9.

Working of the Railway.—Owing to the heavier gradients on the Pelmadulla extension, it is estimated that the locomotives will only be able to haul a train of six vehicles, as against twelve vehicles on the Ratnapura Railway and seven vehicles on the Kelani Valley Railway.

Future Extensions.—The railway can be extended on fairly level ground, about 6 or 7 miles beyond Pelmadulla, in the direction of Balangoda, to Opanaike.

J. PHILLIMORE,
Chief Resident Engineer.

Kelani Valley Railway,
Colombo, January 28, 1904.

ESTIMATES.

GENERAL ABSTRACT.

Heads of Account.	Sub-Heads. Rs.	Main Heads. Rs.	Rate per Mile. Rs.
I.—Land and Compensation ...	91,500 ...	91,500 ...	6,000
II.—Earthwork :—			
(*a*) Felling trees and clearing land ...	6,100 ...	— ...	—
(*b*) Formation of banks and cuttings...	453,009 ...	459,109 ...	30,106
III.—Bridges and Culverts :—			
(*a*) Bridges	576,198 ...	— ...	—
(*b*) Culverts	216,370 ...	792,568 ...	51,972
IV.—Roads and Level Crossings ...	16,104 ...	16,104 ...	1,056
V.—Ballast and Permanent Way :—			
(*a*) Ballast	39,312 ...	— ...	—
(*b*) Permanent way	324,373 ...	363,685 ...	23,848
VI.—Stations and Buildings	90,100 ...	90,100 ...	5,908
VII.—Electric Telegraph	13,725 ...	13,725 ...	900
VIII.—Plant	28,350 ...	28,350 ...	1,859
IX.—Rolling Stock	199,657 ...	199,657 ...	13,092
X.—Engineering and Administration ...	100,000 ...	100,000 ...	6,557
Contingencies	107,851 ...	107,851 ...	7,072
Total ...	2,262,649	2,262,649	148,370

I.—LAND AND COMPENSATION.

Quantity. Acres.	Rate per Acre. Rs.	Amount. Rs.
152·5	600 ...	91,500

Area per mile of railway, 10 acres.
Rate per mile of railway, Rs. 6,000.

II.—EARTHWORK.

(*a*) Felling Trees and Clearing Land.

Quantity. Acres.	Rate per Acre. Rs.	Amount. Rs.
152	40 ...	6,100

Area per mile of railway, 10 acres.
Rate per mile of railway, Rs. 400.

(*b*) Formation of Banks and Cuttings.

Description.	Quantity. Cubic Yards.	Rate per Cubic Yard. Rs. c.	Amount. Rs.
Soft earth	190,104 ...	0 40 ...	76,041
Hard earth... ...	201,176 ...	0 70 ...	140,823
Loose rock	214,574 ...	1 0 ...	214,574
		Contingencies 5 per cent. ...	21,571
		Total ...	453,009

Quantity per mile of railway, 39,728 cubic yards.
Rate per mile of railway, Rs. 29,706.

III.—BRIDGES AND CULVERTS.

(*a*) Bridges (Span over 10 feet).

Position. M. c.	Name of River.	Description.	Size of each Span. Ft. in.	Number of Spans.	Height of Formation. Ft.	Amount inclusive of Steel-work. Rs.
2 44	—	Girder ...	20 0	1	13	6,985
2 60	Erandapana-ela ...	Do. ...	30 0	1	19	13,318
3 7	Kalu-ganga	Do. ...	100 0	3	40	165,700
3 38	—	Do. ...	30 0	1	35	41,080
3 53	Guruhalkoda-dola ...	Do. ...	20 0	1	35	37,145
4 30	Kattigana-dola ...	Do. ...	30 0	1	30	30,842
4 66	Aluketiya-ela ...	Do. ...	20 0	1	20	12,495
4 78	Wakkala-ela... ...	Do. ...	40 0	1	52	82,854
6 70	—	Do. ...	20 0	1	32	31,623
7 44	—	Do. ...	20 0	1	32	31,623
8 12	—	Do. ...	30 0	1	41	55,964
9 75	—	Do. ...	20 0	1	20	12,495
11 76	Wewel-dola... ...	Do. ...	30 0	1	19	13,318
14 56	Guru-dola	Do. ...	30 0	1	19	13,318
			Contingencies 5 per cent. ...			27,438
					Total ...	576,198

Rate per mile of railway, Rs. 37,784.

(*b*) Culverts (Span 10 feet and under 10 feet).

Position. M.	Position. C.	Description.	Size of each Span. Ft.	Size of each Span. in.	Number of Spans.	Height of Formation. Ft.	Amount inclusive of Steelwork. Rs.
0	6	Open top	1	10	1	5	670
0	15	Flat top	2	0	2	17	2,194
0	24	Do.	2	0	1	9	983
0	33	Do.	2	0	1	6	766
0	60	Trough culvert	10	0	1	23	10,230
0	64	Flat top	2	0	1	7	838
0	75	Do.	2	0	1	16	1,491
1	1	Do.	2	0	1	18	1,635
1	7	Do.	2	0	1	6	766
1	14	Open top	1	10	1	5	670
1	28	Trough culvert	10	0	1	17	6,051
1	38	Flat top	2	0	1	17	1,563
1	41	Arch	10	0	1	28	8,078
1	45	Flat top	2	0	1	6	766
1	60	Trough culvert	10	0	1	15	4,976
1	69	Do.	6	0	1	8	1,693
1	77	Do.	10	0	1	5	1,544
2	0	Do.	6	0	1	6	1,291
2	10	Arch	4	0	1	7	1,164
2	14	Open top	1	10	1	3	411
2	16	Do.	1	10	1	5	670
2	19	Arch	4	0	1	10	1,598
2	23	Open top	1	10	1	1	221
2	28	Do.	1	10	1	5	670
2	37	Do.	1	10	1	2	316
2	71	Do.	1	10	1	2	316
2	77	Do.	1	10	1	4	507
3	21	Do.	1	10	1	1	221
3	29	Do.	1	10	1	4	507
3	66	Trough culvert	6	0	1	11	2,614
3	72	Flat top	2	0	1	7	838
3	79	Trough culvert	6	0	1	14	3,794
4	5	Open top	1	10	1	4	507
4	9	Flat top	2	0	1	6	766
4	24	Open top	1	10	1	2	316
4	40	Flat top	2	0	1	6	766
4	47	Trough culvert	10	0	1	12	3,587
4	54	Open top	1	10	1	6	833
4	69	Flat top	2	0	1	8	911
5	10	Do.	2	0	1	8	911
5	26	Open top	1	10	1	1	221
5	30	Do.	1	10	1	5	670
5	38	Do.	1	10	1	6	833
5	41	Do.	1	10	1	4	507
5	46	Do.	1	10	1	1	221
5	55	Do.	1	10	1	2	316
5	61	Do.	1	10	1	1	221
5	68	Trough culvert	6	0	1	8	1,693
5	74	Do.	6	0	1	3	759
5	78	Do.	6	0	1	6	1,291
6	3	Do.	6	0	1	11	2,614
6	14	Do.	10	0	1	10	2,903
6	21	Do.	6	0	1	10	2,307
6	26	Do.	6	0	1	9	2,000
6	34	Do.	6	0	1	7	1,492
6	44	Do.	6	0	1	13	3,359
6	51	Do.	6	0	1	8	1,693
6	59	Do.	10	0	1	17	6,051
6	74	Do.	6	0	1	11	2,614
7	2	Open top	1	10	1	1	221
7	18	Do.	1	10	1	3	411
7	23	Trough culvert	10	0	1	19	7,271
7	35	Open top	1	10	1	4	507
8	1	Trough culvert	6	0	1	17	5,246
8	18	Arch	6	0	1	18	3,232
8	23	Do.	6	0	1	30	5,313
8	30	Flat top	2	0	1	9	983
8	38	Trough culvert	10	0	1	20	7,884
8	50	Do.	6	0	1	7	1,492
8	63	Flat top	2	0	1	14	1,335
8	67	Arch	6	0	1	12	2,198
8	74	Do.	10	0	1	15	3,976
9	1	Trough culvert	10	0	1	4	1,320
9	9	Open top	1	10	1	4	507
9	16	Arch	6	0	1	18	3,232
9	21	Open top	1	10	1	1	221
9	34	Trough culvert	6	0	1	8	1,693
9	40	Open top	1	10	1	1	221
9	48	Flat top	2	0	1	14	1,335
9	57	Do.	2	0	1	6	766
9	65	Open top	1	10	1	3	411
9	70	Flat top	2	0	1	7	838

Position.	Description.	Size of each Span.	Number of Spans.	Height of Formation.	Amount inclusive of Steelwork.
M. C.		Ft. in.		Ft.	Rs.
10 0	Flat top	2 0	1	18	1,635
10 7	Do.	2 0	1	13	1,263
10 19	Do.	2 0	1	13	1,263
10 32	Do.	2 0	1	14	1,335
10 36	Do.	2 0	1	15	1,407
10 38	Do.	2 0	1	14	1,335
10 50	Open top	1 10	1	2	316
10 53	Flat top	2 0	1	12	1,191
10 55	Do.	2 0	1	12	1,191
10 62	Do.	2 0	1	10	1,055
10 79	Open top	1 10	1	3	411
11 3	Flat top	2 0	1	10	1,055
11 8	Open top	1 10	1	2	316
11 15	Do.	1 10	1	2	316
11 23	Flat top	2 0	1	6	766
11 27	Do.	2 0	1	11	1,127
11 29	Do.	2 0	1	11	1,127
11 32	Trough culvert	6 0	1	9	2,000
11 37	Flat top	2 0	1	7	838
11 51	Open top	1 10	1	1	221
11 55	Do.	1 10	1	4	507
11 59	Do.	1 10	2	3	576
11 60	Do.	1 10	1	2	316
11 63	Do.	1 10	1	2	316
11 69	Do.	1 10	1	1	221
12 11	Do.	1 10	1	1	221
12 13	Do.	1 10	1	2	316
12 16	Do.	1 10	1	5	670
12 21	Do.	1 10	1	4	507
12 22	Do.	1 10	1	3	411
12 35	Do.	1 10	1	4	507
12 40	Do.	1 10	1	1	221
12 48	Trough culvert	10 0	1	4	1,320
12 52	Open top	1 10	1	1	221
12 63	Do.	1 10	1	5	670
12 65	Do.	1 10	1	2	316
12 79	Do.	1 10	1	1	221
13 8	Do.	1 10	1	2	316
13 10	Do.	1 10	2	5	877
13 12	Do.	1 10	2	4	707
13 18	Trough culvert	10 0	1	5	1,544
13 27	Open top	1 10	1	1	221
13 30	Do.	1 10	1	1	221
13 35	Flat top	2 0	1	10	1,055
13 37	Trough culvert	6 0	1	7	1,492
13 38	Open top	1 10	2	3	576
13 47	Do.	1 10	1	4	507
13 52	Do.	1 10	1	1	221
13 62	Do.	1 10	1	3	411
13 68	Flat top	2 0	1	8	911
13 70	Do.	2 0	1	8	911
13 71	Do.	2 0	1	8	911
13 76	Do.	2 0	1	8	911
14 0	Trough culvert	6 0	1	5	1,090
14 7	Open top	1 10	1	4	507
14 11	Do.	1 10	1	4	507
14 13	Open top	1 10	2	4	704
14 20	Flat top	2 0	1	6	766
14 31	Open top	1 10	2	5	877
14 38	Flat top	2 0	1	7	838
14 42	Open top	2 0	1	8	911
14 45	Flat top	2 0	2	8	1,182
14 50	Do.	2 0	2	7	1,065
14 60	Open top	1 10	1	4	507
14 65	Do.	1 10	1	5	670
14 70	Flat top	2 0	1	11	1,127
14 73	Do.	2 0	1	12	1,191
14 78	Do.	2 0	1	15	1,407
15 2	Open top	2 0	2	17	2,194
			Contingencies 5 per cent. ...		10,303
				Total ...	216,370

Rate per mile of railway, Rs. 14,188.

IV.—Roads and Level Crossings (inclusive of Road Diversions and Station Approach Roads).

Lump sum, Rs. 16,104.

Rate per mile of railway, Rs. 1,056.

V.—Ballast and Permanent Way.

(*a*) Ballast.

Estimate for one Mile laid complete.

		Rs.
1,560 cubic yards of ballast delivered on berm at Re. 1 per cubic yard	...	1,560
Extra for maintenance and wastage until line is open at 25 per cent.	...	390
Lifting and spreading at 25 cents per cubic yard ...	...	390
Total for one mile laid	...	2,340

Length to be laid.

	Miles.
Through Main Line	15¼
Extra in sidings, &c.	¾
Total length ...	16

Estimate for Whole Line.

	Rs.
16 miles at Rs. 2,340 per mile	37,440
Contingencies 5 per cent.	1,872
Total	39,312

Rate per mile of actual track laid, Rs. 2,457.
Rate per mile of through railway, Rs. 2,578.

(*b*) Permanent Way.

Estimate for one Mile laid complete.

	Rs.
Cost of one mile of material delivered at Maradana Junction	14,539
Carriage from Maradana Junction to Avisawella, 174 tons at Rs. 2·35 per ton ...	409
Local carriage from Avisawella, 14 miles, 174 tons at 50 cents per ton per mile ...	1,218
Loading, unloading, stacking, and other depôt charges at Rs. 5 per ton ...	870
Laying at Rs. 1,000 per mile	1,000
Maintenance, 6 months at Rs. 100	600
Total for one mile laid ...	18,636

Length to be laid.

	Miles.
Through Main Line	15¼
Extra in sidings, &c.	¾
Total length ...	16

Estimate for Whole Line.

	Rs.
16 miles at Rs. 18,636 per mile	298,176
Switches and crossings, 14 sets at Rs. 354 per set	4,956
Teak crossing sleepers, 182 at Rs. 15 each	2,730
61 mileposts at Rs. 25 each	1,525
7 buffer stops at Rs. 220 each	1,540
Contingencies 5 per cent.	15,446
Total	324,373

Rate per mile of actual track laid, Rs. 20,273.
Rate per mile of through railway, Rs. 21,270.

VI.—Stations and Buildings.

Description.	Ratnapura, Mile 0.		Malwala, Mile 3.		Pelmadulla, Mile 15¼.		Totals for Whole Line.	
	No.	Cost.	No.	Cost.	No.	Cost.	No.	Cost.
		Rs.		Rs.		Rs.		Rs.
Passenger station buildings ...	—	—	1	6,000	1	6,000	2	12,000
Latrines ...	—	—	1	500	1	500	2	1,000
Wells ...	—	—	—	—	1	600	1	600
Platform (passenger) ...	Widening	1,000	1	1,500	1	2,000	3	4,500
Platform paling ...	400 l. ft.	800	400 l. ft.	800	400 l. ft.	800	1,200 l. ft.	2,400
Horse and carriage dock ...	—	—	—	—	1	600	1	600
Weighing machine, platform	—	—	1	200	1	200	2	400
Lamp posts and fittings ...	—	—	4	100	4	100	8	200
Station name boards ...	1	20	1	20	1	20	3	60
Goods sheds ...	—	—	1	5,000	1	8,000	2	13,000
Weighbridge and shed ...	—	—	—	—	1	3,600	1	3,600
Crane jib, hand, 3-ton ...	—	—	—	—	1	2,000	1	2,000
Engine shed ...	—	—	—	—	1	6,000	1	6,000
Turntable, engine ...	—	—	—	—	1	4,000	1	4,000
Coal stage ...	—	—	—	—	1	600	1	600
Pumps, force, hand ...	—	—	—	—	1	500	1	500
Piping, cast iron, 3 inch ...	—	—	—	—	300 l. ft.	450	300 l. ft.	450
Do. 6 inch ...	—	—	—	—	400 l. ft.	1,200	400 l. ft.	1,200
Piping earthenware, 9 inch	—	—	400 l. ft.	1,200	400 l. ft.	1,200	800 l. ft.	2,400
Tanks, water, 1,500 gallons	1	1,300	—	—	1	1,300	2	2,600
Water column, 6 inch ...	1	900	—	—	1	900	2	1,800
Hydrants with hose ...	—	—	—	—	1	500	1	500
Signals (per station) ...	—	—	—	1,000	—	1,000	2 stations	2,000
Residences for Traffic Department ...	—	—	—	—	1	4,000	1	4,000
Do. Locomotive Department...	—	—	—	—	2	8,000	2	8,000
Porters' lines, rooms	—	—	—	—	8	2,400	8	2,400
Platelayers' lines, rooms	—	—	6	1,800	6	1,800	12	3,600
Total ...	—	4,020	—	18,120	—	58,270	—	80,410
Three additional sets (18 rooms) platelayers' lines ...								5,400
								85,810
Contingencies 5 per cent. ...								4,290
Total								90,100

Rate per mile of railway, Rs. 5,908.

VII.—Electric Telegraph.

Quantity.	Rate per Mile.	Amount.
	Rs.	Rs.
15·25 miles	900	13,725

Rate per mile of railway, Rs. 900.

VIII.—Plant.

Work for which required.	Cost.	Credit expected. 50 per Cent.	Nett chargeable.
	Rs.	Rs.	Rs.
Earthwork	10,000 ...	5,000 ...	5,000
Bridges and culverts ...	20,000 ...	10,000 ...	10,000
Ballast and permanent way ...	10,000 ...	5,000 ...	5,000
Furniture and unconsumable stores for Ways and Works, Traffic, Locomotive, and Accountant's Departments ...	7,000 ...	— ...	7,000
	Contingencies 5 per cent. ...		1,350
	Total		28,350

Rate per mile of railway, Rs. 1,859.

IX.—Rolling Stock.

Description.	Number required.	Cost landed in Colombo per each.	Erection of each.	Cost of each erected.	Total Amount.
		Rs.	Rs.	Rs.	Rs.
Locomotive	1	26,300	1,000	27,300	27,300
First and second class composite carriages ...	1	16,500	250	16,750	16,750
Third class carriages and brake vans ...	2	9,800	200	10,000	20,000
Goods vans	1	8,000	200	8,200	8,200
Third class carriages	4	8,800	200	9,000	36,000
Covered goods wagons	12	4,600	150	4,750	57,000
High-sided wagons	2	4,000	150	4,150	8,300
Low-sided wagons	2	4,000	150	4,150	8,300
Ballast wagons	2	4,000	150	4,150	8,300
			Contingencies 5 per cent. ...		9,507
			Total		199,657

Rate per mile of railway, Rs. 13,092.

X.—Engineering and Administration (including Survey and Preliminary Expenses).

	Rs.
Lump sum	100,000

Rate per mile of railway, Rs. 6,557.

Profit or Loss to be expected per Annum.

	Rs.
Interest and Sinking Fund (4 per cent. on capital cost of Rs. 2,262,649) ...	90,506
*Working Expenses (as estimated by the General Manager)	61,240
Total ...	151,746
Gross proceeds as estimated by Ratnapura Railway Committee ...	106,328
Nett loss per annum ...	45,418

* The estimate for working expenses is based on an average for the first ten years after the opening of the line, and includes renewal of sleepers and rails. If calculated on the average of the first four years, there would be a reduction of Rs. 7,935, and the nett loss would be Rs. 37,483 instead of Rs. 45,418.

V.—1904.

DESPATCH

RESPECTING

THE SALARY OF THE GOVERNOR OF CEYLON.

Ordered by His Excellency the Governor to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 5 cents.

1904.

SALARY OF THE GOVERNOR OF CEYLON.

The Right Hon. ALFRED LYTTELTON, M.P., to Governor Sir H. A. BLAKE, G.C.M.G.

Ceylon.—No. 460. Downing street, December 8, 1903.

SIR,—I HAVE recently had under my consideration the question of the amount of salary paid to the Governors of first class Crown Colonies, and I have come to the conclusion that the emoluments received by the Governors of Ceylon, the Straits Settlements, and Hong Kong are not sufficient to allow of their supporting the dignity of their position, as it should be supported, without supplementing their official salary from private income.

2. I am sure that your Legislative Council will see the matter in the same light, and I have therefore to request that you will invite the Council to vote an increase to the Governor's salary from the 1st January, 1904, from Rs. 80,000 to Rs. 96,000 a year, of which sum Rs. 18,000 should be regarded as an entertainment allowance to be drawn in full by the Officer Administrating the Government in the Governor's absence on full or half pay leave.

3. Hitherto the Governor of Ceylon when going on leave has only been allowed half pay leave, but if the above-mentioned arrangement is adopted, I am willing to agree that the Governor of Ceylon should for the future enjoy the privilege possessed by the Governors of the Straits Settlements and Hong Kong of taking full pay leave not exceeding three months in any two years.

I have, &c.,
ALFRED LYTTELTON.

VI.—1904.

REPORTS

ON THE

EXTENSION OF THE RAILWAY TO RATNAPURA.

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 55 cents.

1904.

THE RATNAPURA RAILWAY.

No. 1.

The CHIEF RESIDENT ENGINEER, Kelani Valley Railway, to the Hon. the COLONIAL SECRETARY.

No. 128. 15, Horton place, Colombo, October 2, 1903.

Ratnapura Railway.

SIR,—As instructed at an interview held with you to-day, I have the honour to submit my proposals as regards the arrangements to be made, so as if possible to retain for the Ratnapura Railway, if sanctioned, the staff and plant which are now on the Kelani Valley Railway.

I regret that I shall be unable to send in the report, plans, and estimates for the proposed railway until towards the end of this month; the survey has taken me longer than I anticipated, but it has been carried out very thoroughly, and it should be possible to start the actual construction of the line as soon as sanction is granted.

There is no doubt that much time and money will be saved if arrangements can be made to carry on the work of the construction of the Ratnapura Railway immediately on the completion of the Kelani Valley Railway without a break.

2. All stores and plant from the Kelani Valley Railway have been brought into Colombo, and are now stacked at Maradana Junction. I had previously notified the different Government Departments that these stores were available for transfer, but I now propose only to dispose of perishable articles and those which are required for immediate use on the other Railway Extensions, and which could be replaced without causing any delay to the construction of the Ratnapura Railway.

3. As regards the staff which would be required for the Ratnapura Railway, I understand that Mr. M. Cole Bowen, who is the only Assistant Engineer remaining on the Kelani Valley Railway, has applied for the post of Assistant Engineer on the Kadugannawa tunnels under Mr. Oliver, but that his appointment has not yet been definitely sanctioned. If Mr. Bowen does not succeed in obtaining this appointment, he is willing to join the staff of the Ratnapura Railway, and I recommend that he should be appointed accordingly if the line is sanctioned.

4. I understand from Mr. Oliver that two of the Assistants on the Northern Railway will be leaving that line in December next and one in February next; if Mr. Bowen's services are not available for the Ratnapura Railway, it would be desirable to retain these three Engineers, if possible, but if Mr. Bowen is appointed on the Ratnapura Railway, only two other Assistant Engineers would be required.

5. The outdoor staff at present employed on the Yatiyantota bridge of the Kelani Valley Railway might be transferred to the Getahetta and Kuruwita bridges of the Ratnapura Railway, and if it would be possible to obtain a small piece of land at each place so that work might be commenced in December next, a considerable saving of time in the construction of the line would be effected, as, except for the three months from the middle of December to the middle of March, there is so much rain in this district that no satisfactory progress can be made in bridge foundations. I would also recommend that arrangements should be made to acquire at once the land required for station sites, so that the station buildings could be erected at once, and be available for residences for the Assistant Engineers and other members of the Engineering Staff.

6. The draughtsmen employed on the plans of the Ratnapura Railway Survey have received notice of discharge to take effect at the end of the current month; I now recommend that their services should be retained and utilized in making the land plans and other plans required for the construction of the Ratnapura Railway. The total amount of their salaries is about Rs. 400 per mensem.

7. The services of Mr. B. S. Bastiampillai, Shroff, might also be retained if there is any likelihood of the construction of the Ratnapura Railway being sanctioned, and in this case I would request you to cancel my letters Nos. 69 and 105 of 12th May and 3rd August respectively.

8. I recommend that the headquarters of the Ratnapura Railway should be in Colombo, as also the chief stores. The lease of my office expires at the end of this year, and I would request permission to make arrangements to extend the lease. I would also ask that the General Manager may be requested to allow the office of my Chief Storekeeper to remain at Maradana Junction during the construction of the Ratnapura Railway.

I am, &c.,

J. PHILLIMORE,
Chief Resident Engineer.

No. 2.

The CHIEF RESIDENT ENGINEER, Kelani Valley Railway, to the Hon. the COLONIAL SECRETARY.

Ratnapura Railway.

No. 135. Colombo, October 19, 1903.

SIR,—REFERRING to your No. 80 of 17th instant, I have the honour to state for the information of His Excellency the Governor that I estimate that the services of the staff of the Kelani Valley Railway can be dispensed with at the end of December next.

2. The only members of the Kelani Valley Railway staff for whom passages will have to be paid back to England are myself and Mr. M. Cole Bowen, Assistant Engineer.

If the construction of the Ratnapura Railway were to start at the end of this year, I could, as stated in paragraph 4 of my letter No. 128 of 2nd instant, make use of some of the staff of the Northern Railway, whose passages would otherwise have to be paid back to England.

I am, &c.,
J. PHILLIMORE,
Chief Resident Engineer.

No. 3.

The CHIEF RESIDENT ENGINEER, Kelani Valley Railway, to the Hon. the COLONIAL SECRETARY.

No. 140. Colombo, October 29, 1903.

Ratnapura Railway.

SIR,—REFERRING to your No. 83 of 24th instant, I have the honour to state that the cost of the proposed extension to Ratnapura will amount approximately, as far as I can judge, to Rs. 2,928,145, or Rs. 108,450 per mile for 27 miles.

2. I hope to send in my detailed estimates on Saturday, 31st instant, and I understand that the report of the Committee appointed to collect statistics on the amount of the traffic which would be secured by the proposed extension, and on the profits likely to result therefrom, will also be ready by that date.

I am, &c.,
J. PHILLIMORE,
Chief Resident Engineer.

No. 4.

The CHIEF RESIDENT ENGINEER, Kelani Valley Railway, to the Hon. the COLONIAL SECRETARY.

No. 141. Colombo, October 31, 1903.

Ratnapura Railway Extension.

SIR,—REFERRING to my No. 140 of 29th instant, I have the honour to submit herewith report on the survey of the proposed Ratnapura Railway, together with estimates of the probable cost of the construction of the railway.

2. The detail plans and sections are being sent to the binders, and will be submitted during the course of next week.

3. The drawings of stations, bridges, buildings, &c., are not yet complete, and will be forwarded as soon as they are ready.

I presume that all plans and a copy of the report and estimates will be forwarded to the Consulting Engineers through the Crown Agents, and I would suggest that, if Government approve, the report and estimates might be printed, as probably several copies will be required. I have not prepared copies either of the plans or of the report and estimate.

I am, &c.,
J. PHILLIMORE,
Chief Resident Engineer.

Enclosure in No. 4.

REPORT.

Preliminary.—In December, 1900, a memorial from the inhabitants of the District of Ratnapura was presented to His Excellency the Governor, representing the need of railway extension in Sabaragamuwa, and praying that a survey should be undertaken of a line proposed from Dehiowita on the Kelani Valley Railway to Ratnapura.

As the result of a preliminary examination of the country made by the undersigned and Mr. M. Cole Bowen, Assistant Engineer, in January, 1901, it was recommended (*vide* Sessional Paper XVI. of 1901) that the junction of the proposed Ratnapura Extension with the Kelani Valley Railway should be at Avisawella instead of at Dehiowita, and that the trace should follow generally the course of the Avisawella-Ratnapura road.

Towards the end of 1902 the Government ordered a survey of the proposed line, and the survey was put in hand about the beginning of 1903.

Remarks on Survey.—Various trial lines were run, of which the most favourable was selected and thoroughly contoured, and the centre line of railway was afterwards laid down on paper and then staked out.

By permission of the Surveyor-General copies were made of the plans in his office, showing the road between Avisawella and Ratnapura, to a scale of 4 chains to an inch, and these plans were of great assistance, enabling the preliminary traverse to be dispensed with in those cases where it was decided to take the trace alongside the road; in such cases a line of levels was run along the road, and cross sections were taken at fixed intervals, in order that the centre line of railway might be most advantageously located.

The line from Ratnapura to 18¼ miles was staked out by a party working under Mr. H. G. Hickey, and the line from 18¼ to 27 miles by a party working under Mr. L. G. Northway. Mr. Hickey and Mr. Northway have both shown skill in the selection and staking out of the trace.

A line recommended by Mr. F. Elson, Superintendent of Yogama estate, crossing the Sitawaka-ganga near the 31st milestone (road mileage), and running at the back of Ernan, Glassel, and Wood-end estates, with a station at Panawal and another at Alnoor, was examined, but as it would evidently be much more costly both to construct and to work than the adopted trace,* it was not considered advisable to spend time or money in surveying this route.

General Location.—From Avisawella station the line runs for a distance of about 14 chains alongside the Kelani Valley Railway, the cutting to the east of Avisawella station being widened to take the double line; it then crosses the public road opposite the Avisawella resthouse, the road being diverted inside the present compound of the resthouse, and runs for some distance parallel to the Ratnapura road, at a distance of about 10 chains from the road and at a higher level than it.

At 0 mile 70 chains the line touches the west side of the road, and at 1 mile 14 chains and 1 mile 34 chains it passes in front of two bungalows belonging to Mr. Marshall at the distance of about 1 chain from each of the bungalows. At 3 miles the line diverges from the road in order to avoid the steep gradients of the latter.

The Getahetta-oya is crossed at 3 miles 67 chains by a girder bridge, 1 span of 80 feet, and the line then runs for about 8 miles close to the public road through fruit gardens and paddy fields, crossing and re-crossing the road at 5 miles 51 chains, 8 miles 3 chains, and 12 miles 34 chains.

The trace is nowhere more than ¾ of a mile distant from the public road. Besides being on the best trace as regards the amount of earthwork and bridging, the advantages of keeping the trace near the public road are that the public road will form a service road during construction, facilitating both the construction and inspection of the railway, and also a feeder road to the stations after the line has been opened; it will also be possible at any future time to open fresh stations at any points where required along the road as traffic develops, without any further expense in constructing roads. Throughout the first 6 miles a series of ravines and ridges is crossed, necessitating heavy earthwork in formation.

Kendangomuwa station is reached at 8 miles 78 chains, being situated on the level, at the summits of two gradients, alongside the public road and near the junction with the Gansabhawa road leading through the Panawal korale. This road is at present suitable for cart traffic from Dehiowita as far as Yogama factory only, and crosses the Sitawaka river by a causeway at Algoda. If the remainder of the track were constructed as a cart road to Kendangomuwa, an additional outlet would be provided for the tea estates in Panawal korale. Kendangomuwa is the centre of a native population engaged in gemming, mining, &c., and a goods shed and a passenger station are provided here.

At 12 miles 34 chains the line takes a sweep to the north through a small gap in the Para-kaduwa hills, and rejoins the public road about 3 miles further on. The railway between these two points is ¾ mile longer than the road, but much more favourable gradients are obtained.

The line rises 60 feet from 11 miles 71 chains to 13 miles 9 chains, the latter being the highest point on the railway, the formation level being 11 feet above the level of Avisawella station and 62 feet above the level of Ratnapura station.

Parakaduwa station is reached at 13 miles 42 chains, being situated close to the minor road which leads from the Hemingford group of tea estates (971 acres †) and about half mile distant from the public road. A goods shed and passenger station are provided here, and also a water tank and water column.

The line passes the Pussella resthouse at 15 miles 44 chains, and then keeps close to the public road on the west side as far as 21 miles 66 chains.

The Kuru-ganga is crossed at 19 miles 25 chains by a girder bridge, 1 span of 150 feet, and Kuruwita station is reached at 19 miles 38 chains, being situated adjoining the public road and close to a path which leads to Carney tea estate (172 acres) and Adam's Peak. About 10,000 pilgrims annually proceed by this path to Adam's Peak. Kuruwita will also be the station for Paradise estate (tea, 214 acres, and cinnamon), and a goods shed and passenger station are provided.

The Ehelwala-ela is crossed at 19 miles 58 chains by a girder bridge, 1 span of 60 feet, and spans the Malang-ela at 21 miles 65 chains, also by a girder bridge, 1 span of 60 feet.

At 21 miles 66 chains the line leaves the public road and does not again touch it for the remainder of the distance to Ratnapura.

From 24 miles to 25 miles the line runs through Palm Garden tea estate (179 acres), and a siding can be opened if required at 24 miles 50 chains, where the line is on the level. Galkaduwa tea estate (213 acres) is also near here, being situated on the opposite side of the public road.

The selection of a suitable site for Ratnapura station was a matter of some difficulty, owing to the country in the immediate neighbourhood of the town being either occupied by buildings or being below flood level. The site finally adopted is on a hill adjoining the Inner Circular road, near the junction of the road which leads from the bazaar past St. Peter's Roman Catholic church. This site, although involving heavy earthwork in cutting, fulfils the necessary conditions of safety from floods, proximity to the business portion of the town, and possibility of future extension of the line. The station is about ¼ of a mile distant from Ratnapura bazaar.

Mileage, Distances, &c.—The fixed point from which the mileage is reckoned, or the zero point of the railway, is at the switches on the main line of the Kelani Valley Railway to the east of Avisawella station. There are one or two small breaks in the chainage owing to re-alignments having been run after the first staking out.

The line terminates at Ratnapura; the length of the line from the centre of the booking office at Avisawella station to the centre of the booking office at Ratnapura station is 26 miles 75 chains, and from the buffer stops at the west end of Avisawella station to the buffer stops at the east end of Ratnapura station is 27 miles 8 chains. For the purposes of the estimate the length of the line to be constructed is taken as 27 miles.

From 0 mile to 1 mile 41 chains (Kirimeti-ela) the line is in the Western Province; the remainder of the line is in the Province of Sabaragamuwa.

---

* *Vide* appendix, pages 20, 21.

† The areas of tea under cultivation are taken from Ferguson's Handbook for 1902.

The datum for levels has been taken the same as the datum of the Kelani Valley Railway, viz., 100 feet below mean sea level. To obtain the mean sea level at any point, 100 feet must therefore be deducted from the reduced levels on the section.

Dressed blocks of stone have been sunk level with the ground at tangent points and apex points of curves, and the exact positions of the tangent points and apex points have been marked on these stones; where these tangent points and apex points occur in swamps or paddy fields they have been marked with cairns of stones instead of dressed stone blocks.

Gauge.—The works have been designed for the 2-feet 6-inch gauge, that being the gauge of the Kelani Valley Railway, and for a single line only.

Gradients, Curves, &c.—The sharpest curves are of 10° angle of curvature, or 5·73 chains radius,* the heaviest gradient is 1 in 100 (·66 foot per chain), the compensation adopted for curves is ·02 per cent. per degree of curvature,† and the maximum resistance due to curve and gradient combined is 1 per cent., equivalent to a ruling gradient of 1 in 100 on the straight.

On the Kelani Valley Railway the sharpest curves are of 16° angle of curvature, or 3·59 chains radius, the heaviest gradient is 1 in 80 (·825 foot per chain), no compensation has been allowed for curves, and the maximum resistance due to curve and gradient combined is 1·57 per cent., equivalent to a ruling gradient of 1 in 64 on the straight.

The minimum straight between reverse curves is 2 chains,‡ and the minimum level between reverse grades is 4 chains; on the Kelani Valley Railway the minimum straight between reverse curves is 78 links, and the minimum level between reverse grades is 2 chains.

Gradient and curve abstracts are given in the appendix on pages 13 and 14, a table showing the heaviest permissible gradient for different degrees of curvature on page 14, and orders from Government relating to the curves on the proposed railway on page 21.

Estimates and Cost.—The total estimated cost of the railway, including rolling stock and all equipment, amounts to Rs. 2,928,145, or Rs. 108,450 per mile. The actual cost of the Kelani Valley Railway has been, according to the final revised estimate of June, 1903, Rs. 112,230 per mile, and this amount has been adopted for the purposes of comparison with the cost of the present estimates of the Ratnapura Railway. There will, however, be further charges on the Kelani Valley Railway estimate, on account of additional rolling stock required, and proportionate amount of interest on loan, which expenditure has been ordered by Government since the preparation of the estimate referred to, and has not been included in that estimate.

The general abstracts of estimates are given on pages 7 and 8. The general abstract (II.) is in the form which has hitherto been adopted, showing in Schedule No. 1 the work which would be performed by a contractor, and in Schedule No. 2 the work which would be carried out by Government. It is not likely that the construction of the Ratnapura Railway will be let to a contractor, and the general abstract (I.) has therefore been prepared also (on page 7) in another form, which shows at a glance the total estimated cost of each main head of work.

In the estimates on page 7 a column has been added showing the actual cost per mile of each main head of work on the Kelani Valley Railway (according to final revised estimate dated 9th June, 1903); it will be noticed that the cost of the following items per mile is practically the same as on the Kelani Valley Railway :—

VII.—Electric Telegraph; X.—Engineering and Administration.

The cost of the following items is in excess of that of similar items on the Kelani Valley Railway :—

II.—Earthwork.
IX.—Rolling Stock.

The cost of the following items is less than that of similar items in the Kelani Valley Railway :—

I.—Land and Compensation.
III.—Bridges and Culverts.
IV.—Roads and Level Crossings.
V.—Ballast and Permanent Way.
VI.—Stations and Buildings.

Item VIII., Plant, forms a new head, not having been allowed for in the Kelani Valley Railway estimates. Except in the case of Land and Compensation, Felling Trees and Clearing Land, Electric Telegraph, and Engineering and Administration, 5 per cent. has been added for contingencies to each main head to cover any extra expenditure which may be necessary under each respective head.

With the exception of Land and Compensation, all of these items have been estimated at a mileage rate, in accordance with the amounts which have been actually expended under the same heads on the Kelani Valley Railway, and the amounts are not likely to be exceeded in the Ratnapura Railway.

Five per cent. for contingencies has also been allowed in the General Abstract on the total amount of the estimate, which sum is intended to cover any extra expenditure such as interest on loan, loss on exchange, or other charges or liabilities which may be incurred, and which are not covered by the main heads of the estimate.

Land and Compensation.—In the estimates the area of land required is taken as 10 acres per mile, being about the same area per mile as the actual amount of land acquired for the Kelani Valley Railway. The rate per acre, including the cost of all dwelling-houses to be acquired and all compensation to be paid to landowners on every account, is taken as Rs. 600. The actual cost of the land acquired for the Kelani Valley Railway, including all compensation, has been about Rs. 700 per acre. On the Ratnapura Railway there will not be the heavy cost of the land acquired

---

* There is one exception to this, viz., the short curve immediately leading into Ratnapura station, which is of 16° angle of curvature, or 3·59 chains radius.

† In two or three instances on short lengths, where momentum grades can be made use of, the compensation has not been enforced.

‡ The only exception to this is at 20 miles 25 chains, where there is a length of 1 chain 6 links straight between reverse curves of 2° angle of curvature, 28·65 chains radius.

in the neighbourhood of Colombo for the Kelani Valley Railway, but on the other hand there will be a good deal of frontage to the Avisawella-Ratnapura road, including garden land and paddy fields. The estimate for land and compensation is given on page 8.

Felling Trees and Clearing Land.—In the estimates the rate per acre is taken practically the same as the actual cost per acre of felling trees and clearing land on the Kelani Valley Railway. The estimate for felling trees and clearing land is given on page 8.

Earthwork in Formation of Banks and Cuttings.—For embankments the estimates provide for a width of 12 feet at formation, with slopes of 1½ to 1. For cuttings the estimates provide for a width of 14 feet at formation, with slopes of ½ to 1 in earth and ¼ to 1 in rock. The amount of lead allowed is 10 chains, viz., from 5 chains of cutting to 5 chains of bank. It is proposed to purchase sufficient light rails and tip wagons to allow of all the important cuttings being tipped to bank; the light rails and tip wagons will practically cost the Government nothing, as the contractors have to pay for their hire and the rails can be re-sold on the completion of construction. The cost of lead, of turfing slopes and pitching to banks, and of retaining walls has been included in the rates for earthwork, as also the cost of maintenance and final dressing of banks and cuttings. The probable nature of the soil in banks and cuttings has been judged from surface indications only.

The cost of earthwork per mile of railway amounts to Rs. 16,906, or Rs. 2,825 in excess of the actual cost of earthwork per mile of railway on the Kelani Valley Railway; the amount of earthwork could be reduced by using a steeper ruling gradient, say 1 in 80 (compensated for curvature), instead of the existing ruling gradient of 1 in 100 (compensated for curvature). The general configuration of the country is, however, generally adapted to a flat grade, and it is only at certain places, such as the cuttings at 1 mile, 7 miles, and 13 miles 20 chains, that any considerable reduction could be made in earthwork by using steeper gradients; it has therefore been considered advisable to incur extra expenditure at these places and to preserve the ruling gradient of 1 in 100 (compensated for curvature), so as to reduce the future working expenses of the railway. In case it is decided to make the ruling gradient steeper than 1 in 100, it is recommended that compensation should still be allowed for curvature.

The abstract estimate for earthwork is given on page 8, and the table of earthwork quantities in the appendix on pages 15–18. Definitions of the soils to which the rates apply are given in the appendix on page 14.

Bridges.—The following are the more important bridges in order of size:—

Name of River.	Mileage. M.	C.	Bridge Spans. Size.	No.	Cost of Bridge. Rs.	Cost per Lineal Foot of Waterway. Rs.
Kuru-ganga ...	19	25	150 ft. ...	1 ...	72,496 ...	483
Getahetta-oya ...	3	67	80 ft. ...	1 ...	47,444 ...	593
Ehelwala-ela ...	19	56	60 ft. ...	1 ...	21,330 ...	355
Melang-ela ...	21	66	60 ft. ...	1 ...	21,370 ...	356

The total cost of bridges and culverts per mile of railway amounts to Rs. 23,946, or Rs. 5,983 less than the actual total cost of bridges and culverts per mile of railway on the Kelani Valley Railway. The reason of the less cost is the absence of any bridges of extensive span and great height, such as the Sitawaka bridge and Yatiyantota bridge on the Kelani Valley Railway. The largest bridge on the Ratnapura Railway is the 150-feet girder bridge over the Kuru-ganga.

The detailed estimates for bridges of 60 feet span and over are given in the appendix on pages 18 and 19, and the abstract estimate for all bridges is given on page 8; the rates from which the estimates for bridges under 60 feet span have been calculated are given in the appendix on page 19. Drawings of the bridges are given in the book of drawings, special drawings being furnished for bridges of 60 feet span and over, and type drawings for the remainder.

Culverts.—It is proposed to make use of culverts of the following type: 1 foot 10 inches open tops, 2 feet flat tops, 4 feet, 6 feet, and 10 feet arches, and 6 feet and 10 feet culverts covered with trough corrugated steel flooring. It is considered that trough flooring culverts, while being only slightly more expensive than open girder culverts, make a better running road, as the rails can be packed up with ballast to suit the level of the rails on each side of the culvert, and also on curves the line can more readily be brought into shape than when fastened down rigidly, as in the case of open girder culverts. In the case of derailments also a serious accident may be avoided by the adoption of these covered culverts. Westwood and Bailey's, Dorman Long & Co.'s, or other standard makes may be used. Where small irrigation drains are required it is proposed to make use of 18-inch Doulton's stoneware pipes; these should be laid with sockets upstream and the joints should be filled with cement mortar. The 2-feet concrete pipes made use of on the Kelani Valley Railway did not always prove satisfactory, as in some places the pipes cracked after the bank had been filled in, causing expense in the removal and renewal of the pipes.

It is possible that if the concrete pipes were made of cement and sand only, or cement and gravel without any admixture of broken stone, and if they were not allowed to be laid for at least three months after making, and were very carefully laid and bedded, they might prove satisfactory, but it has been considered safer to estimate for stoneware pipes.

The abstract estimate for all culverts is given on pages 9–11, and the rates on which the estimates are based are given in the appendix on page 19. Type drawings of culverts are given in the book of drawings.

Roads and Level Crossings.—Under this head the estimates provide for all road diversions required and approach roads to stations, inclusive of earthwork, metalling, culverts, and guard rails. All road crossings will be on the level, and steel guard rails of the ordinary type will be provided, the hardwood guard rails made use of in the Kelani Valley Railway not being found suitable. Neither gate lodges nor gates will be required.

The total cost of roads and level crossings per mile of railway amounts to Rs. 1,056, or Rs. 27 less than the actual total cost of roads and level crossings per mile of railway on the Kelani Valley Railway. The abstract estimates for roads and level crossings is given on page 11.

Ballast.—The estimates provide for a width of ballast at rail level of 6 feet, with 1¼ to 1 slope and a depth of 6 inches of ballast under the sleepers. The estimate for ballast is given on page 11.

Permanent Way.—The estimates provide for permanent way similar to that of the Kelani Valley Railway, viz., steel rails weighing 46¼ lb. to the lineal yard, on Jarrah sleepers 5 ft. by 9 in. by 4½ in. It is recommended that Karri sleepers should not be used.

The total cost of ballast and permanent way per mile of railway amounts to Rs. 24,594, or Rs. 559 less than the actual total cost of ballast and permanent way per mile of railway on the Kelani Valley Railway. The rate for steel rails and fastenings has been taken slightly lower than the average cost of steel rails procured for the Kelani Valley Railway, the price of steel having fallen. The estimate for ballast and permanent way is given on pages 11 and 12, and the particulars of weight and cost of 1 mile of permanent way materials are given in the appendix on page 20.

Stations and Buiildings.—The following is a list of stations :—

Names of Stations.	Distance from Avisawella. Miles.	Distance from Colombo. Miles.
Avisawella	— ...	36⅞
Kendangomuwa	9 ...	45⅞
Parakaduwa	13½ ...	50⅜
Kuruwita	19½ ...	56⅜
Ratnapura	28⅞ ...	63¾

Provision has been made in the estimates for the alterations and additions necessary at Avisawella station to form the junction with the Kelani Valley Railway.

To meet the wishes of the General Manager of the Railway, the intermediate stations at Kendangomuwa, Parakaduwa, and Kuruwita have been designed of the "island" type, and as this arrangement will involve additional expense owing to increased width of earthwork and platform gravelling, the General Manager has agreed that the platforms should be made up to rail level only with an edging of stone, instead of to 13 inches above rail level with platform walls, as on the Kelani Valley Railway. These three stations are of similar design, except that an additional siding has been put in at Kuruwita on account of the pilgrim traffic expected at that station, and that a water tank and column are provided at Parakaduwa, but not at Kendangomuwa or Kuruwita. It is presumed that Government will provide shelters in the neighbourhood, but not in the station ground, for the pilgrims proceeding to and from Adam's Peak who will alight and entrain at Kuruwita station.

At Ratnapura the following buildings are provided : one goods shed 90 ft. by 25 ft., an engine shed 60 ft. by 25 ft., and six residences and twenty rooms of coolies' lines for the Traffic, Locomotive, and Ways and Works Departments. An engine turntable, coal stage, and water tank are also provided.

The total cost of stations and buildings per mile of railway amounts to Rs. 5,872, or Rs. 1,784 less than the actual total cost of stations and buildings per mile of railway on the Kelani Valley Railway. The reasons for the cost of stations being less on the Ratnapura Railway than on the Kelani Valley Railway are : first, that on the Ratnapura Railway there is not the heavy cost of the extensive terminal station at Colombo ; second, there are fewer stations on the Ratnapura Railway in proportion to the length of the line than on the Kelani Valley Railway ; and third, the expenditure on furniture and unconsumable stores, which in the Kelani Valley Railway estimates was charged to "Stations," has in the present Ratnapura Railway estimates been charged to "Plant." The estimate for stations and buildings is given on page 12.

Electric Telegraph will be supplied and erected by the Postmaster-General ; the estimate is taken at practically the same rate per mile as the actual cost of the telegraph line on the Kelani Valley Railway. The estimate for electric telegraph is given on page 12.

Plant.—This main head has been introduced into the estimate to cover the cost of all plant provided for construction, as well as the furniture and unconsumable stores to be provided for the Ways and Works, Traffic, Locomotive, and Accountant's Departments.

In the Kelani Valley Railway estimates no special provision was made for plant, except for furniture and unconsumable stores for working the railway, which were charged under the head of "Stations." The estimate for plant is given on page 13.

Rolling Stock.—The estimates provide for rolling stock in accordance with the requirements of the General Manager. The total cost of rolling stock per mile of railway amounts to Rs. 16,316, or Rs. 1,545 in excess of the actual total cost of rolling stock per mile of railway on the Kelani Valley Railway, according to the final revised estimate of 1903. It should, however, be noted that since the submission of the final revised estimate of June, 1903, the General Manager of the Railway has represented that additional rolling stock is required for the Kelani Valley Railway, and the same has been sanctioned by Government ; the cost of this additional rolling stock will probably amount to Rs. 62,750, and will raise the rate of rolling stock on the Kelani Valley Railway to Rs. 16,078 per mile. Thus, the estimated cost of rolling stock on the Ratnapura Railway is only Rs. 238 per mile more than what the actual cost of rolling stock on the Kelani Valley Railway will amount to when the additional stock required has been provided. The estimate for rolling stock is given on page 13.

Engineering and Administration.—The cost of engineering and administration, including the survey and preliminary expenses of the railway, is taken at practically the same rate per mile as the actual cost per mile under this head on the Kelani Valley Railway. According to the usual practice in Ceylon Railway Extensions, the following expenses will be apportioned to this head :—

(*a*) A proportion of the salaries and charges and office expenses of the Consulting Engineers.
(*b*) Full salary and allowances and passage money of the Chief Resident Engineer.
(*c*) Half salaries and allowances and passage money of the Assistant Engineers.
(*d*) Half salaries of accountant and clerks and draughtsmen.
(*e*) Rent of offices.

The remaining half salaries and allowances, &c., of Assistant Engineers, accountant, clerks, and draughtsmen are charged to works, as also the salaries of all outdoor establishment. The estimate for engineering and administration is given on page 13.

Labour and Materials.—There should be no difficulty in procuring skilled as well as unskilled labour for the construction of the railway, and building stone and ballast are obtainable along the line.

It is recommended that, as in the case of the Kelani Valley Railway, the Ratnapura Railway should be constructed on the petty contract system.

Arrangement of Staff.—It is proposed that during construction the head office and chief store should be in Colombo, and that the line should be divided into three sections, each in charge of an Assistant Engineer, as follows :—

Number of Section.	Length of Section. M.	Principal Works.	At M.	C.
1	0–8¾	Avisawella station (additions to)	—	—
		Getahetta-oya bridge, 1 span of 80 feet	3	67
2	8¾–19	Kendangomuwa station	8	78
		Parakaduwa station	13	42
3	19–27	Kuru-ganga bridge, 1 span of 150 feet	19	25
		Kuruwita station	19	38
		Ehelawala-ela bridge, 1 span of 60 feet	19	56
		Malang-ela bridge, 1 span of 60 feet	21	66
		Ratnapura station	26	68

Traffic and Profits to be expected.—A report on these matters is being submitted by the Committee which was appointed for the purpose by His Excellency the Governor.

Working of the Railway.—It is understood that the section from Avisawella to Ratnapura will be worked separately from the section between Colombo and Yatiyantota, *i.e.*, that trains will run as now from Colombo through to Yatiyantota, and that separate trains will be made up at Avisawella for Ratnapura.

Owing to the flatter curves and gradients on the Ratnapura Extension, it is estimated that the locomotives will be able to haul a train of twelve vehicles, as against seven vehicles on the Kelani Valley Railway.

Future Extensions.—A separate report will be submitted with respect to a proposed extension to Pelmadulla.

J. PHILLIMORE,
Chief Resident Engineer.

Colombo, October 31, 1903.

ESTIMATES.

GENERAL ABSTRACT.

(I.)

Heads of Account.	Sub-heads. Rs.	Main Heads. Rs.	Rate per Mile, Ratnapura Railway. Rs.	Rate per Mile of corresponding Head on Kelani Valley Railway. Rs.
I.—Land and Compensation	162,000	162,000	6,000	7,188
II.—Earthwork :—				
(*a*) Felling trees and clearing land	10,800	—	—	—
(*b*) Formation of banks and cuttings	445,663	456,463	16,906	14,081
III.—Bridges and Culverts :—				
(*a*) Bridges	400,253	—	—	—
(*b*) Culverts	246,289	646,542	23,946	29,929
IV.—Roads and Level Crossings	28,513	28,513	1,056	1,083
V.—Ballast and Permanent Way :—				
(*a*) Ballast	71,253	—	—	—
(*b*) Permanent Way	592,787	664,040	24,594	25,153
VI.—Stations and Buildings	158,550	158,550	5,872	7,656
VII.—Electric Telegraph	24,300	24,300	900	896
VIII.—Plant	47,775	47,775	1,769	—
IX.—Rolling Stock	440,527	440,527	16,316	14,771
X.—Engineering and Administration	160,000	160,000	5,927	5,938
Contingencies	139,435	139,435	5,164	5,535
Total	2,928,145	2,928,145	108,450	112,230

(II.)

Heads of Account. *Schedule No. 1.*	Amounts. Rs.	Total Amounts. Rs.
A.—Felling Trees and Clearing Land	10,800	
B.—Earthwork	445,663	
C.—Bridges	316,647	
D.—Culverts	238,844	
E.—Ballast and Permanent Way	201,152	
F.—Roads and Level Crossings	28,513	
G.—Stations and Buildings	158,550	
H.—Plant	47,775	
I.—Contingencies, 5 per cent.	72,397	
		1,520,341

Heads of Account. *Schedule No. 2.*	Amounts. Rs.	Total Amount. Rs.
J.—Electric Telegraph	24,300	
K.—Land and Compensation	162,000	
L.—Engineering and Administration	160,000	
M.—Steel in Bridge Girders and Cast Iron in Bed Plates	83,606	
N.—Steel in Culvert Girders	7,445	
O.—Permanent Way, Steel Rails	462,888	
P.—Permanent Way, Fastenings		
Q.—Switches and Crossings		
R.—Sleepers		
S.—Rolling stock	440,527	
T.—Contingencies, 5 per cent.	67,038	
		1,407,804
Total of both Schedules ...	—	2,928,145

I.—Land and Compensation.

Quantity. Acres.	Rate per Acre. Rs.	Amount. Rs.
270	600	162,000
Allocation.		
Schedule I.	...	Nil
Do. II.	...	162,000

Rate per mile of railway, Rs. 6,000.

II.—Earthwork.

(*a*) Felling Trees and Clearing Land.

Quantity. Acres.	Rate per Acre. Rs.	Amount. Rs.
270	40	10,800

(*b*) Formation of Banks and Cuttings.

Description.	Quantity. Cubic Yards.	Rate per Cubic Yard. Rs. c.	Amount. Rs.
Soft earth	296,212 ...	0 40 ...	118,485
Hard earth	366,820	0 70 ...	256,774
Loose rock	45,457 ...	1 0 ...	45,457
Solid rock	1,490 ...	2 50 ...	3,725
		Contingencies, 5 per cent. ...	21,222
		Total	445,663
Allocation.			Rs.
Schedule I.		... ...	456,463
Do. II.		... ...	Nil

Rate per mile of railway, Rs. 16,906.

III.—Bridges and Culverts.

(*a*) Bridges.

Position. M. c.	Name of River.	Description.	Size of each Span. Ft. in.	Number of Spans.	Height of Formation. Ft.	Cost of Masonry, &c. Rs.	Cost of Girders in Colombo. Rs.	Total Amount. Rs.
2 55	Dehigas-ela ...	Girder ...	15 0	1	25	18,874	500	19,374
3 67	Getahetta-oya ...	Do. ...	80 0	1	32	37,444	10,000	47,444
7 67	—	Do. ...	20 0	1	11	5,494	875	6,369
8 25	—	Do. ...	20 0	1	11	5,494	875	6,369
8 28	—	Do. ...	40 0	1	12	8,215	3,000	11,215
9 20	—	Do. ...	15 0	1	17	10,530	500	11,030
9 28	Kakunamala-ela ...	Do. ...	20 0	1	11	5,494	875	6,369
9 35	Jambugahawala-ela	Do.	40 0	1	15	10,730	3,000	13,730
9 48	—	Do. ...	15 0	1	8	3,601	500	4,101
10 20	—	Do. ...	15 0	1	14	9,452	500	9,952
10 50	Pallamulla-ela ...	Do. ...	30 0	1	13	9,508	2,250	11,758
10 78	Talawita-ela ...	Do. ...	20 0	3	7	4,978	2,625	7,603
11 11	—	Do. ...	30 0	1	9	6,606	2,250	8,856
14 78	—	Do. ...	20 0	1	10	5,296	875	6,171
16 1	—	Do. ...	15 0	1	9	3,601	500	4,101
16 20	—	Do. ...	20 0	1	10	5,494	875	6,369
17 29	—	Do. ...	15 0	1	12	3,890	500	4,390
18 53	Warakadeniya-ela ...	Do. ...	40 0	1	16	9,889	3,000	12,889
19 25	Kuru-ganga ...	Do. ...	150 0	1	25	47,496	25,000	72,496
19 56	Ehelwala-ela ...	Do. ...	60 0	1	23	15,705	5,625	21,330
19 74	Malawa-ela ...	Do. ...	40 0	1	25	21,935	3,000	24,935
21 66	Malang-ela ...	Do. ...	60 0	1	21	15,745	5,625	21,370
23 31	Maha-ela ...	Do. ...	40 0	1	14	9,874	3,000	12,874
24 14	—	Do. ...	20 0	1	7	3,292	875	4,167
26 13	Katugas-ela ...	Do. ...	40 0	1	28	22,953	3,000	25,953
			Contingencies, 5 per cent.			15,057	3,981	19,038
					Total ...	316,647	83,606	400,253

Allocation.		Rs.
Schedule I.		316,647
Do. II.		83,606

Rate per mile of railway, Rs. 14,824.

(*b*) Culverts.

Position.	Description.	Size of each Span.	Number of Spans.	Height of Formation.	Cost of Masonry, &c.	Cost of Steel Flooring delivered in Colombo.	Total Amount.
M. C.		Ft. in.		Ft.	Rs.	Rs.	Rs.
0 15	Pipe	1 6	1	3	210	—	210
0 18	Do.	1 6	2	22	1,560	—	1,560
0 29	Arch	10 0	1	40	11,543	—	11,543
0 40	Pipe	1 6	1	6	300	—	300
0 49	Arch	4 0	1	18	2,725	—	2,725
0 58	Do.	4 0	1	14	2,173	—	2,173
0 68	Open top	1 10	1	3	411	—	411
1 7	Arch	10 0	1	23	6,511	—	6,511
1 19	Do.	10 0	1	26	7,435	—	7,435
1 41	Do.	10 0	1	18	4,920	—	4,920
1 61	Pipe	1 6	1	6	300	—	300
1 74	Arch	4 0	1	16	2,441	—	2,441
2 0	Do.	4 0	1	7	1,164	—	1,164
2 2	Pipe	1 6	1	6	300	—	300
2 4	Trough culvert ...	6 0	1	6	1,105	186	1,291
2 9	Open top	1 10	1	3	411	—	411
2 22	Pipe	1 6	1	6	300	—	300
2 33	Arch	10 0	1	24	6,803	—	6,803
2 41	Pipe	1 6	1	24	840	—	840
2 76	Flat top	2 0	2	18	2,305	—	2,305
3 15	Arch	10 0	1	22	6,195	—	6,195
3 51	Flat top	2 0	2	26	3,181	—	3,181
3 75	Pipe	1 6	1	19	690	—	690
4 5	Do.	1 6	1	7	330	—	330
4 9	Do.	1 6	1	11	450	—	450
4 12	Do.	1 6	2	17	1,260	—	1,260
4 23	Do.	1 6	1	7	330	—	330
4 28	Do.	1 6	1	12	480	—	480
4 31	Do.	1 6	1	5	270	—	270
4 36	Open top	1 10	1	1	221	—	221
4 39	Arch	4 0	1	28	4,143	—	4,143
4 50	Pipe	1 6	1	7	330	—	330
4 53	Do.	1 6	1	13	510	—	510
4 61	Open top	1 10	1	5	670	—	670
4 64	Flat top	2 0	1	9	983	—	983
4 68	Pipe	1 6	1	4	240	—	240
4 72	Do.	1 6	2	17	1,260	—	1,260
4 75	Do.	1 6	1	15	570	—	570
5 2	Flat top	2 0	1	13	1,263	—	1,263
5 6	Pipe	1 6	1	6	300	—	300
5 15	Arch	6 0	1	12	2,198	—	2,198
5 21	Do.	4 0	1	15	2,315	—	2,315
5 40	Trough culvert ...	6 0	1	9	1,814	186	2,000
5 43	Do.	6 0	1	14	3,608	186	3,794
5 55	Arch	10 0	1	16	4,288	—	4,288
5 57	Pipe	1 6	1	16	600	—	600
5 67	Open top	1 10	1	5	670	—	670
5 74	Flat top	2 0	1	6	766	—	766
6 1	Pipe	1 6	1	7	330	—	330
6 10	Open top	1 10	1	3	411	—	411
6 17	Trough culvert ...	6 0	1	9	1,814	186	2,000
6 37	Do.	6 0	1	8	1,507	186	1,693
6 51	Flat top	2 0	1	8	911	—	911
6 59	Arch	4 0	1	9	1,446	—	1,446
7 25	Flat top	2 0	2	10	1,404	—	1,404
7 36	Pipe	1 6	1	7	330	—	330
7 44	Do.	1 6	1	4	240	—	240
7 46	Do.	1 6	1	4	240	—	240
8 17	Flat top	2 0	1	6	766	—	766
8 32	Pipe	1 6	1	10	420	—	420
8 39	Do.	1 6	1	9	390	—	390
8 59	Flat top	2 0	2	11	1,515	—	1,515
9 60	Open top	1 10	1	5	670	—	670
9 79	Trough culvert ...	6 0	1	7	1,306	186	1,492
10 62	Pipe	1 6	1	10	420	—	420
11 19	Flat top	2 0	1	7	838	—	838
11 31	Do.	2 0	2	6	954	—	954
11 39	Do.	2 0	2	11	1,515	—	1,515
11 46	Do.	2 0	1	12	1,191	—	1,191
11 55	Arch	6 0	1	9	1,663	—	1,663
11 69	Pipe	1 6	1	4	240	—	240
11 76	Do.	1 6	1	5	270	—	270
12 0	Trough culvert ...	10 0	1	7	1,604	388	1,992
12 8	Pipe	1 6	1	11	450	—	450
12 31	Do.	1 6	2	12	960	—	960

Position. M.	Position. C.	Description.	Size of each Span. Ft.	Size of each Span. in.	Number of Spans.	Height of Formation. Ft.	Cost of Masonry, &c. Rs.	Cost of Steel Flooring delivered in Colombo. Rs.	Total Amount. Rs.
12	41	Flat top	2	0	1	9	983	—	983
12	43	Do.	2	0	1	12	1,191	—	1,191
12	58	Do.	2	0	1	11	1,127	—	1,127
12	67	Do.	2	0	1	10	1,055	—	1,055
12	76	Do.	2	0	1	13	1,263	—	1,263
13	3	Do.	2	0	1	13	1,263	—	1,263
13	10	Trough culvert ...	6	0	1	9	1,814	186	2,000
13	32	Do.	6	0	1	5	904	186	1,090
13	54	Flat top	2	0	1	8	911	—	911
13	74	Trough culvert ...	10	0	1	8	1,831	388	2,219
14	8	Flat top	2	0	1	6	766	—	766
14	37	Trough culvert ...	10	0	1	7	1,604	388	1,992
14	40	Pipe	1	6	1	7	330	—	330
14	56	Trough culvert ...	10	0	1	5	1,156	388	1,544
14	67	Do.	10	0	1	6	1,380	388	1,768
15	3	Pipe	1	6	1	9	390	—	390
15	14	Trough culvert ...	10	0	1	3	785	388	1,173
15	21	Do.	10	0	1	10	2,515	388	2,903
15	24	Pipe	1	6	1	6	300	—	300
15	29	Do.	1	6	1	9	390	—	390
15	38	Flat top	2	0	1	13	1,263	—	1,263
15	47	Trough culvert ...	10	0	1	17	5,663	388	6,051
15	54	Do.	10	0	1	5	1,156	388	1,544
15	61	Arch	6	0	1	9	1,663	—	1,663
15	75	Pipe	1	6	1	5	270	—	270
16	9	Do.	1	6	1	7	330	—	330
16	37	Arch	6	0	1	11	2,009	—	2,009
16	42	Flat top	2	0	1	7	839	—	839
16	49	Trough culvert ...	10	0	1	6	1,380	388	1,768
16	59	Open top	1	10	1	2	316	—	316
16	74	Arch	10	0	1	13	3,344	—	3,344
17	8	Trough culvert ...	10	0	1	6	1,380	388	1,768
17	47	Arch	6	0	1	16	2,886	—	2,886
17	60	Trough culvert ...	6	0	1	10	2,121	186	2,307
17	65	Flat top	2	0	1	7	838	—	838
17	78	Do.	2	0	2	10	1,404	—	1,404
18	19	Do.	2	0	1	7	838	—	838
18	26	Arch	4	0	1	8	1,304	—	1,304
18	36	Trough culvert ...	10	0	1	3	785	388	1,173
18	71	Open top	1	10	1	2	316	—	316
18	75	Do.	1	10	1	3	411	—	411
19	2	Pipe	1	6	1	4	240	—	240
19	8	Do.	1	6	1	12	480	—	480
19	41	Flat top	2	0	2	12	1,642	—	1,642
19	51	Trough culvert ...	10	0	1	21	8,278	388	8,666
20	21	Flat top	2	0	1	14	1,335	—	1,335
20	45	Do.	2	0	2	17	2,194	—	2,194
20	70	Do.	2	0	1	7	838	—	838
21	3	Pipe	1	6	1	6	300	—	300
21	13	Flat top	2	0	1	9	983	—	983
21	49	Do.	2	0	1	11	1,127	—	1,127
21	60	Pipe	1	6	1	5	270	—	270
21	72	Do.	1	6	1	6	300	—	300
21	76	Do.	1	6	1	6	300	—	300
21	79	Open top ...	1	10	2	1	358	—	358
22	7	Flat top	2	0	2	13	1,753	—	1,753
22	17	Open top	1	10	1	1	221	—	221
22	21	Flat top	2	0	1	8	911	—	911
22	45	Open top	1	10	1	4	507	—	507
22	61	Do.	1	10	1	5	670	—	670
22	70	Do.	1	10	1	5	670	—	670
23	4	Flat top	2	0	1	6	766	—	766
23	10	Do.	2	0	1	7	838	—	838
23	23	Trough culvert ...	6	0	1	9	1,814	186	2,000
23	45	Open top	1	10	1	5	670	—	670
23	51	Do.	1	10	1	3	411	—	411
23	57	Do.	1	10	1	5	670	—	670
23	71	Do.	1	10	1	4	507	—	507
24	2	Do.	1	10	1	4	507	—	507
24	25	Do.	1	10	1	3	411	—	411
24	35	Do.	1	10	1	5	670	—	670
24	40	Do.	1	10	1	4	507	—	507
24	60	Do.	1	10	1	4	507	—	507
24	72	Do.	1	10	1	5	670	—	670
25	0	Pipe	1	6	1	6	300	—	300
25	3	Do.	1	6	1	4	240	—	240
25	9	Flat top	2	0	1	7	838	—	838
25	15	Do.	2	0	1	8	911	—	911
25	38	Do.	2	0	1	13	1,263	—	1,263
25	46	Do.	2	0	1	11	1,127	—	1,127
25	51	Do.	2	0	1	9	983	—	983
25	60	Do.	2	0	1	13	1,263	—	1,263
25	69	Pipe	1	6	1	6	300	—	300
26	6	Do.	1	6	1	20	720	—	720
26	8	Do.	1	6	1	22	780	—	780

Position.	Description.	Size of each Span.	Number of Spans.	Height of Formation.	Cost of Masonry, &c.	Cost of Steel Flooring delivered in Colombo.	Total Amount.
M. c.		Ft. in.		Ft.	Rs.	Rs.	Rs.
26 20	Pipe	1 6	1	20	720	—	720
26 24	Do.	1 6	1	21	750	—	750
26 31	Flat top	2 0	1	9	983	—	983
26 34	Do.	2 0	1	14	1,335	—	1,335
26 39	Do.	2 0	1	11	1,127	—	1,127
26 47	Do.	2 0	1	20	1,776	—	1,776
26 59	Trough Culvert ...	6 0	1	21	7,402	186	7,588
26 65	Flat top (in station) ...	2 0	1	14	2,357	--	2,357
		Contingencies, 5 per cent. ...			11,373	355	11,728
		Total			238,844	7,445	246,289

Allocation.	Rs.
Schedule I.	238,844
Do. II.	7,445

Rate, per mile of railway, Rs. 9,122.

IV.—Roads and Level Crossings (inclusive of Road Diversions and Station Approach Roads).

Description.	Quantity.	Rate. Rs. c.	Per.	Amount. Rs.
Earthwork ...	12,815 cubic yards ...	0 70 ...	cubic yard ...	8,970
Metalling ...	5,593 superficial yards ...	2 0 ...	superficial yard ...	11,186
Guard rails ...	350 lineal feet ...	2 0 ...	lineal foot ...	700
Culverts ...	5	— ...	— ...	6,300
		Contingencies, 5 per cent. ...		1,357
		Total ...	...	28,513

Allocation.	Rs.
Schedule I.	28,513
Do. II.	Nil.

Rate per mile of railway, Rs. 1,056.

V.—Ballast and Permanent Way.

(*a*) Ballast.

Estimate for one Mile laid complete.

	Rs.
1,560 cube yards of ballast delivered on berm at Re. 1 per cubic yard ...	1,560
Extra for maintenance and wastage until line is open, at 25 per cent. ...	390
Lifting and spreading at 25 cents per cubic yard	390
Total for one mile laid ...	2,340

Length to be laid.

	Miles.
Through Main Line	27
Extra in sidings, &c.	2
Total length ...	29

Estimate for Whole Line.

	Rs.
29 miles at Rs. 2,340 per mile	67,860
Contingencies, 5 per cent. ...	3,393
Total	71,253

Allocation.	Rs.
Schedule I.	71,253
Do. II.	Nil.

Rate per mile of actual track laid, Rs. 2,457.
Rate per mile of through railway, Rs. 2,639.

(*b*) Permanent Way.

Estimate for one Mile laid complete.

	Rs.
Cost of one mile of material delivered at Maradana Junction ...	14,539
Carriage from Maradana Junction to Avisawella, 174 tons at Rs. 2·35 per ton ...	409
Local carriage from Avisawella, 14 miles, 174 tons at 50 cents per ton per mile...	1,218
Loading, unloading, stacking, and other depôt charges at Rs. 5 per ton ...	870
Laying at Rs. 1,000 per mile	1,000
Maintenance, 6 months at Rs. 100	600
Total for one mile laid ...	18,636

Length to be laid.

	Miles.
Through Main Line	27
Extra in sidings, &c.	2
Total length	29

Estimate for Whole Line.

	Rs.
29 miles at Rs. 18,636 per mile	540,444
Switches and crossings, 35 sets at Rs. 354 per set	12,390
Teak crossing sleepers, 455 at Rs. 15 each	6,825
108 mileposts at Rs. 25 each	2,700
10 buffer stops at Rs. 220 each	2,200
Contingencies, 5 per cent.	28,228
Total	592,787

Allocation.

	Rs.
Schedule I.	129,899
Do. II.	462,888

Rate per mile of actual track laid, Rs. 20,441.
Rate per mile of through railway, Rs. 21,955.

VI.—STATIONS AND BUILDINGS.

Description.	Avisawella, Mile 0.		Kendangomuwa, Mile 9.		Parakaduwa, Mile 13½.		Kuruwita, Mile 19½.		Ratnapura, Mile 26⅞.		Totals for Whole Line	
	No.	Cost.	No.	Cost.	No.	Cost.	No.	Cost.	No.	Cost.	No.	Cost.
		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.
Passenger station buildings	—	—	1	6,000	1	6,000	1	6,000	1	6,000	4	24,000
Latrines	—	—	1	500	1	500	1	500	1	500	4	2,000
Wells	—	—	1	600	1	600	1	600	1	600	4	2,400
Platform (passenger)	Extension	1,000	1	1,500	1	1,500	1	1,500	1	2,000	5	7,500
Platform walls (passenger)	Extension	2,000	—	—	—	—	—	—	—	—	1	2,000
Platform paling	400 l. ft.	800	400 l. ft.	800	400 l. ft.	800	400 l. ft.	800	400 l. ft.	800	2,000 l. ft.	4,000
Horse and carriage dock	—	—	—	—	—	—	—	—	1	600	1	600
Weighing machine, platform	—	—	1	200	1	200	1	200	1	200	4	800
Lamp posts and fittings	4	100	4	100	4	100	4	100	4	100	20	500
Station name boards	1	20	1	20	1	20	1	20	1	20	5	100
Goods sheds	—	—	1	5,000	1	5,000	1	5,000	1	8,000	4	23,000
Weighbridge and shed	—	—	—	—	—	—	—	—	1	3,600	1	3,600
Crane jib, hand, 3-ton	—	—	—	—	—	—	—	—	1	2,000	1	2,000
Engine shed	—	—	—	—	—	—	—	—	1	6,000	1	6,000
Turntable, engine	—	—	—	—	—	—	—	—	1	4,000	1	4,000
Coal stage	1	600	—	—	—	—	—	—	1	600	2	1,200
Pumps, force, hand	—	—	—	—	1	500	—	—	1	500	2	1,000
Piping, cast iron, 3 inch	300 l. ft.	450	—	—	300 l. ft.	450	—	—	300 l. ft.	450	900 l. ft.	1,350
Do. 6 inch	150 l. ft.	450	—	—	400 l. ft.	1,200	—	—	400 l. ft.	1,200	950 l. ft.	2,850
Piping, earthenware, 9 inch	—	—	400 l. ft.	1,200	400 l. ft.	1,200	400 l. ft.	1,200	400 l. ft.	1,200	1,600 l. ft.	4,800
Tanks, water, 1,500 gallons	Shifting	100	—	—	1	1,300	—	—	1	1,300	2	2,700
Water column, 6 inch	—	—	—	—	1	900	—	—	—	—	1	900
Hydrants with hose	1	500	—	—	—	—	—	—	1	500	2	1,000
Signals (per station)	—	1,000	—	1,000	—	1,000	—	1,000	—	1,000	5 stations.	5,000
Residences for Traffic Department	—	—	—	—	—	—	—	—	3	12,000	3	12,000
Do. Locomotive Department	—	—	—	—	—	—	—	—	2	8,000	2	8,000
Do. Ways and Works Department	—	—	—	—	—	—	—	—	1	4,000	1	4,000
Porters' lines, rooms	3	900	—	—	—	—	—	—	6	1,800	9	2,700
Firemen's lines, rooms	—	—	—	—	—	—	—	—	7	2,100	7	2,100
Platelayers' lines, rooms	—	—	7	2,100	7	2,100	7	2,100	7	2,100	28	8,400
Total	—	7,920	—	19,020	—	23,370		19,020		71,170		140,500

	Rs.
Five additional sets (35 rooms) platelayers' lines	10,500
Total	151,000
Contingencies, 5 per cent.	7,550
Total	158,550

Allocation.

	Rs.
Schedule I.	158,550
Do. II.	Nil

Rate per mile of railway, Rs. 5,872.

VII.—ELECTRIC TELEGRAPH.

Quantity.	Rate per Mile. Rs.	Amount. Rs.
27 miles	900	24,300

Allocation.	Rs.
Schedule I.	Nil
Do. II.	24,300

Rate per mile of railway, Rs. 900.

VIII.—PLANT.

Work for which required.	Cost.	Credit expected. 50 per cent.	Nett chargeable.
	Rs.	Rs.	Rs.
Earthwork	10,000	5,000	5,000
Bridges and culverts ...	40,000	20,000	20,000
Ballast and permanent way ...	15,000	7,500	7,500
Furniture and unconsumable stores for Ways and Works, Traffic, Locomotive, and Accountant's Departments ...	13,000	—	13,000
		Contingencies, 5 per cent. ...	2,275
		Total ...	47,775

Allocation.	Rs.
Schedule I.	47,775
Do. II.	Nil

Rate per mile of railway, Rs. 1,769.

IX.—ROLLING STOCK.

Description.	Number required.	Cost landed in Colombo, each.	Erection of each.	Cost of each erected.	Total Amount.
		Rs.	Rs.	Rs.	Rs.
Locomotives	3	26,300	1,000	27,300	81,900
First and second class composite carriages ...	3	16,500	250	16,750	50,250
Third class carriages and brake vans ...	6	9,800	200	10,000	60,000
Third class carriages	8	8,800	200	9,000	72,000
Covered goods wagons	24	4,600	150	4,750	114,000
Highsided wagons	4	4,000	150	4,150	16,600
Lowsided wagons	4	4,000	150	4,150	16,600
Horse and carriage truck	1	8,000	200	8,200	8,200
			Contingencies, 5 per cent. ...		20,977
			Total		440,527

Allocation.	Rs.
Schedule I.	Nil
Do. II.	440,527

Rate per mile of railway, Rs. 16,316.

X.—ENGINEERING AND ADMINISTRATION (INCLUDING SURVEY AND PRELIMINARY EXPENSES).

	Rs.
Lump sum	160,000

Allocation.	Rs.
Schedule I.	Nil
Do. II.	160,000

Rate per mile of railway, Rs. 5,927.

APPENDIX.

Gradient Abstract.

Inclination.	Number of Grades.	Total Length. M. C. L.	Percentage of Total Length of Line.
1 in 100	24 ...	4 24 74 ...	15·96
From 1 in 102 to 1 in 110 (inclusive) ...	11 ...	2 9 15 ...	7·83
From 1 in 111 to 1 in 120 do. ...	10 ...	2 32 81 ...	8·92
From 1 in 125 to 1 in 150 do. ...	10 ...	1 71 24 ...	7·00
From 1 in 160 to 1 in 200 do. ...	7 ...	1 24 0 ...	4·82
From 1 in 220 to 1 in 300 do. ...	8 ...	1 62 71 ...	6·61
From 1 in 310 to 1 in 660 do. ...	14 ...	4 1 85	14·90
Level	58 ...	9 13 50 ...	33·96
Total ...	142	27 0 0	100·00

Curve Abstract.

Angle of Curvature. ° ′	Radius. Chains.	Number of each.	Total Length: M. C. L.	Total Curvature. ° ′
1 0	= 57·30	10	1 11 79	91 47
2 0	= 28 65	7	0 43 9	86 11
3 0	= 19·10	7	0 58 57	175 43
3 30	= 16·37	2	0 36 11	66 23
4 0	= 14·33	15	1 22 12	408 29
5 0	= 11·46	13	1 17 36	486 48
6 0	= 9·55	17	1 39 16	714 58
6 30	= 8·82	1	0 8 57	55 42
7 0	= 8·19	4	0 28 87	202 5
8 0	= 7·17	16	1 7 33	698 38
10 0	= 5·74	12	0 64 10	641 0
	Total	104	9 17 7	3,625 44

NOTE.—The short curve leading into Ratnapura station has not been included in the above abstract.

Ratio of curve to total length of line per cent. ... ... 34·12
Average amount of curvature per mile ... ... 134° 27′

Table showing Compensation to be allowed in Gradients on account of Curves.

Calculated at 0·02 per cent. per degree of curve.

Ruling gradient on the straight, 1 in 100.

Curve on which Gradient occurs.			Resistance due to Curve per Cent.	Heaviest permissible Grade.		
Angle of Curvature.	Radius in Chains.	Degree Decimals.		Per Cent.	Inclination.	Rise per Chain.
° ′	Straight.	—	Nil.	1·00	1 in 100	·66
1 0	57·30	1·00	·02	·98	1 in 102	·65
2 0	28·65	2·00	·04	·96	1 in 104	·63
3 0	19·10	3·00	·06	·94	1 in 106	·625
4 0	14·33	4·00	·08	·92	1 in 109	·61
5 0	11·46	5·00	·10	·90	1 in 111	·59
6 0	9·55	6·00	·12	·88	1 in 114	·58
7 0	8·19	7·00	·14	·86	1 in 116	·57
8 0	7·17	8·00	·16	·84	1 in 119	·55
9 0	6·37	9·00	·18	·82	1 in 122	·54
10 0	5·74	10·00	·20	·80	1 in 125	·53
10 30	5·46	10·50	·21	·79	1 in 126	·52
11 0	5·22	11·00	·22	·78	1 in 128	·51
11 30	4·99	11·50	·23	·77	1 in 130	·51
12 0	4·78	12·00	·24	·76	1 in 132	·50
12 30	4·59	12·50	·25	·75	1 in 133	·50
13 0	4·42	13·00	·26	·74	1 in 135	·49
13 30	4·25	13·50	·27	·73	1 in 137	·48
14 0	4·10	14·00	·28	·72	1 in 139	·48
14 30	3·96	14·50	·29	·71	1 in 141	·47
15 0	3·83	15·00	·30	·70	1 in 143	·46
15 30	3·71	15·50	·31	·69	1 in 145	·46
16 0	3 59	16·00	·32	·68	1 in 147	·45

Definitions of Soils.

For the purposes of the estimate the earthwork has been divided into four classes, viz. :—

(*a*) *Soft earth*, at 40 cents per cubic yard.
(*b*) *Hard earth*, at 70 cents per cubic yard.
(*c*) *Loose rock*, at Re. 1 per cubic yard.
(*d*) *Solid rock*, at Rs. 2·50 per cubic yard.

(*a*) *Soft Earth.*—Under this head is classed any material which can be readily dug, such as vegetable mould, alluvial soil, earth from paddy fields, swamps, &c.

(*b*) *Hard Earth.*—Under this head is classed material which requires the use of a pick, such as gravel, disinte, grated rock, &c., also materials containing over 10 per cent. of boulders.

(*c*) *Loose Rock.*—Under this head are classed materials containing 20 per cent. or over of boulders and hard cabook, also other materials requiring occasional blasting.

(*d*) *Solid Rock.*—Compact slab rock requiring blasting throughout.

Note.—The above rates are intended to cover cost of lead up to 10 chains in length, *i.e.*, from 5 chains of cutting to 5 chains of bank, turfing, pitching, and retaining walls where required, as well as maintenance of banks and cuttings until the opening of the line and final dressing of same. For the purposes of the estimate all banks are taken as 12 feet in width with 1½ to 1 slopes, and all cuttings as 14 feet in width with ½ to 1 slopes in earth, and ¼ to 1 in rock.

Table of Earthwork Quantities.

Note.—In this table the total quantities of all cuttings are included and the quantities of banks to be made up from side cutting only. The quantities of banks to be tipped from cuttings are not included.

No. of Bank.	No. of Cutting.	Soft Earth. c. yd.	Hard Earth. c. yd.	Loose Rock. c. yd.	Solid Rock. c. yd.
—	1	—	3,994	—	—
1	—	—	5,569	—	—
—	2	—	978	—	—
2	—	—	8,309	—	—
—	3	—	—	5,038	—
3	—	—	—	—	—
—	4	—	1,776	—	—
4	—	—	—	—	—
—	5	—	—	2,292	—
5	—	—	2,385	—	—
—	6	—	177	—	—
6	—	—	—	—	—
—	7	—	13,050	—	—
7	—	15,817	—	—	—
—	8	—	3,627	—	—
8	—	5,779	—	—	—
—	9	—	5,223	—	—
9	—	—	—	—	—
—	10	—	2,243	—	—
10	—	—	—	—	—
—	11	—	1,373	—	—
11	—	—	484	—	—
—	12	—	136	—	—
12	—	—	—	—	—
—	13	—	1,176	—	—
13	—	—	—	—	—
—	14	—	702	—	—
14	—	—	13,898	—	—
—	15	—	8,213	—	—
15	—	4,451	—	—	—
—	16	—	4,672	—	—
16	—	—	937	—	—
—	17	—	2,947	—	—
17	—	4,364	—	—	—
—	18	—	9,723	—	—
18	—	—	5,170	—	—
—	19	—	4,457	—	—
19	—	13,782	—	—	—
—	20	—	—	2,056	—
20	—	—	2,380	—	—
—	21	—	1,900	—	—
21	—	—	468	—	—
—	22	—	375	—	—
22	—	—	4,273	—	—
—	23	—	2,211	—	—
23	—	—	—	—	—
—	24	—	—	147	—
24	—	—	217	—	—
—	25	—	—	78	—
25	—	—	—	—	—
—	26	—	—	2,745	—
26	—	—	832	—	—
—	27	—	1,888	—	—
27	—	—	335	—	—
—	28	—	1,528	—	—
28	—	—	—	—	—
—	29	—	23	—	—
29	—	—	—	—	—
—	30	—	651	—	—
30	—	—	—	—	—
—	31	—	49	—	—
31	—	—	5,654	—	—
—	32	—	—	3,271	—
32	—	—	—	—	—
—	33	—	—	3,406	—
33	—	—	—	—	—
—	34	—	—	1,721	—
34	—	—	1,862	—	—
—	35	—	2,596	—	—
35	—	—	—	—	—
—	36	—	5,313	—	—
36	—	4,644	—	—	—
—	37	248	—	—	—
37	—	1,126	—	—	—
—	38	222	—	—	—
38	—	—	—	—	—
—	39	132	—	—	—
39	—	1,154	—	—	298
—	40	—	—	—	—
40	—	—	—	—	—
—	41	—	—	—	—
41	—	6,683	3,959	—	—
—	42	—	—	—	—
42	—	8,739	—	796	—
—	43	—	—	—	—
43	—	—	—	—	—

No of Bank.	No. of Cutting.	Soft Earth. c. yds.	Hard Earth. c. yds.	Loose Rock. c. yds.	Solid Rock. c. yds.
—	44	33	—	—	—
44	—	6,885	—	—	—
—	45	137	—	—	—
45	—	—	—	—	—
—	46	230	—	—	—
46	—	—	—	—	—
—	47	10	—	—	—
47	—	1,555	—	—	—
—	48	—	—	—	—
48	—	19,176	—	—	278
—	49	—	14,167	—	—
49	—	21,704	—	—	—
—	50	85	—	—	—
50	—	983	—	—	—
—	51	46	—	—	—
51	—	—	—	—	—
—	52	—	2,661	—	—
52	—	2,022	—	—	—
—	53	—	2,716	—	—
53	—	4,914	—	—	—
—	54	—	1,341	—	—
54	—	—	1,244	—	—
—	55	—	787	—	—
55	—	4,249	—	—	—
—	56	—	358	—	—
56	—	3,085	—	—	—
—	57	—	—	394	—
57	—	4,517	—	—	—
—	58	—	—	1,158	—
58	—	2,282	—	—	—
—	59	—	—	375	—
59	—	—	—	—	—
—	60	—	—	3,015	—
60	—	—	—	—	—
—	61	—	2,769	—	—
61	—	—	2,084	—	—
—	62	—	—	1,693	—
62	—	—	787	—	—
—	63	—	—	518	—
63	—	—	2,447	—	—
—	64	—	—	552	—
64	—	—	2,236	—	—
—	65	—	—	1,053	—
65	—	—	2,580	—	—
—	66	—	—	125	—
66	—	—	—	—	—
—	67	—	—	8,725	—
67	—	—	—	—	—
—	68	—	1,902	—	—
68	—	12,880	—	—	—
—	69	—	812	—	—
69	—	—	—	—	—
—	70	—	4,210	—	—
70	—	1,322	—	—	—
—	71	—	214	—	—
71	—	1,862	—	—	—
—	72	—	809	—	—
72	—	1,862	—	—	—
—	73	—	—	—	684
73	—	—	—	—	—
—	74	—	1,689	—	—
74	—	—	—	—	—
—	75	—	—	—	230
75	—	—	2,500	—	—
—	76	—	217	—	—
76	—	1,067	—	—	—
—	77	—	1,923	—	—
77	—	4,597	—	—	—
—	78	—	4,527	—	—
78	—	—	—	—	—
—	79	—	582	—	—
79	—	2,653	—	—	—
—	80	608	—	—	—
80	—	586	—	—	—
—	81	—	2,735	—	—
81	—	1,667	—	—	—
—	82	224	—	—	—
82	—	—	—	—	—
—	83	—	1,801	—	—
83	—	—	—	—	—
—	84	—	987	—	—
84	—	—	3,970	—	—
—	85	—	904	—	—
85	—	—	—	—	—
—	86	—	—	—	—
86	—	3,725	—	1,405	—
—	87	—	4,172	—	—
87	—	1,659	—	—	—
—	88	—	1,067	—	—
88	—	—	1,796	—	—

No. of Bank.	No. of Cutting.	Soft Earth. c. yds.	Hard Earth. c. yds.	Loose Rock. c. yds.	Solid Rock. c. yds.
—	89	—	938	—	—
89	—	431	—	—	—
—	90	—	6,680	—	—
90	—	2,944	—	—	—
—	91	324	—	—	—
91	—	—	—	—	—
—	92	—	—	1,157	—
92	—	4,453	—	—	—
—	93	—	—	1,644	—
93	—	—	—	—	—
—	94	—	2,334	—	—
94	—	—	—	—	—
—	95	—	3,362	—	—
95	—	2,349	—	—	—
—	96	—	14,332	—	—
96	—	2,233	—	—	—
—	97	—	1,356	—	—
97	—	—	—	—	—
—	98	882	—	—	—
98	—	20,541	—	—	—
—	99	—	5,224	—	—
99	—	—	12,938	—	—
—	100	—	7,001	—	—
100	—	—	2,931	—	—
—	101	—	2,669	—	—
101	—	13,330	—	—	—
—	102	—	345	—	—
102	—	—	—	—	—
—	103	—	909	—	—
103	—	—	495	—	—
—	104	—	817	—	—
104	—	—	—	—	—
—	105	—	9,005	—	—
105	—	—	603	—	—
—	106	—	—	1,687	—
106	—	—	1,066	—	—
—	107	—	365	—	—
107	—	—	—	—	—
—	108	—	—	406	—
108	—	—	5,949	—	—
—	109	—	587	—	—
109	—	—	—	—	—
—	110	1,250	—	—	—
110	—	—	—	—	—
—	111	752	—	—	—
111	—	—	1,973	—	—
—	112	—	5,114	—	—
112	—	—	570	—	—
—	113	742	—	—	—
113	—	—	—	—	—
—	114	—	758	—	—
114	—	539	—	—	—
—	115	73	—	—	—
115	—	—	—	—	—
—	116	—	1,355	—	—
116	—	627	—	—	—
—	117	629	—	—	—
117	—	531	—	—	—
—	118	528	—	—	—
118	—	135	—	—	—
—	119	—	1,456	—	—
119	—	3,824	—	—	—
—	120	—	1,506	—	—
120	—	2,933	—	—	—
—	121	—	582	—	—
121	—	—	—	—	—
—	122	—	629	—	—
122	—	—	1,080	—	—
—	123	—	1,813	—	—
123	—	—	—	—	—
—	124	—	323	—	—
124	—	—	—	—	—
—	125	—	531	—	—
125	—	—	767	—	—
—	126	—	183	—	—
126	—	—	—	—	—
—	127	313	—	—	—
127	—	1,271	—	—	—
—	128	323	—	—	—
128	—	1,203	—	—	—
—	129	283	—	—	—
129	—	1,941	—	—	—
—	130	—	198	—	—
130	—	—	—	—	—
—	131	—	411	—	—
131	—	—	1,307	—	—
—	132	—	1,534	—	—
132	—	—	508	—	—
—	133	924	—	—	—

No. of Bank.	No. of Cutting.	Soft Earth. c. yds.	Hard Earth. c. yds.	Loose Rock. c. yds.	Solid Rock. c. yds.
133	—	4,515	—	—	—
—	134	2,009	—	—	—
134	—	—	—	—	—
—	135	—	1,963	—	—
135	—	—	—	—	—
—	136	—	110	—	—
136	—	—	2,701	—	—
—	137	—	147	—	—
137	—	—	875	—	—
—	138	193	—	—	—
138	—	8,255	—	—	—
—	139	93	—	—	—
139	—	1,556	—	—	—
—	140	71	—	—	—
140	—	7,925	—	—	—
—	141	378	—	—	—
141	—	8,054	—	—	—
—	142	6,024	—	—	—
142	—	4,480	—	—	—
—	143	—	250	—	—
143	—	—	—	—	—
—	144	—	462	—	—
144	—	—	1,795	—	—
—	145	—	1,259	—	—
145	—	—	—	—	—
—	146	3,078	—	—	—
146	—	5,744	—	—	—
—	147	530	—	—	—
147	—	4,486	—	—	—
—	148	—	39,235	—	—
148	—	—	—	—	—
	Total	296,212	366,820	45,457	1,490

Detailed Estimate of Getahetta-oya Bridge at 3 Miles 67 Chains, one Span of 80 ft.

Description.	Quantity.	Rate. Rs. c.	Per	Amount. Rs.
Excavation in foundation	1,000 cubic yards	2 0	cubic yard	2,000
Cement concrete	242 do.	20 0	do.	4,840
Masonry	1,035 do.	20 0	do.	20,700
Bed stones	54 cubic feet	2 0	cubic foot	108
Copings and caps	204 do.	1 50	do.	306
Girders delivered in Colombo	40 tons	250 0	ton	10,000.
Transport, erection, and painting of girders	40 do.	100 0	do.	4,000
Teak timber	90 cubic feet	5 0	cubic foot	450
Pitching	54 cubic yards	10 0	cubic yard	540
Service works	—	—	—	3,500
Establishment	—	—	—	1,000
			Total	47,444

Detailed Estimate of Kuru-ganga Bridge at 19 Miles 25 Chains, one Span of 150 ft.

Description.	Quantity.	Rate. Rs. c.	Per	Amount. Rs.
Excavation in foundation	700 cubic yards.	2 0	cubic yard	1,400
Cement concrete	170 do.	20 0	do.	3,400
Masonry	670 do.	20 0	do.	13,400
Bed stones	176 cubic feet	2 0	cubic foot	352
Coping and caps	96 do.	1 50	do.	144
Girders delivered in Colombo	100 tons	250 0	ton	25,000
Transport, erection, and painting of girders	100 do.	200 0	do.	20,000
Teak timber	160 cubic feet	5 0	cubic foot	800
Service works	—	—	—	7,000
Establishment	—	—	—	1,000
			Total	72,496

Detailed Estimate of Ehelwala-ela Bridge at 19 Miles 56 Chains, one Span of 60 ft.

Description.	Quantity.	Rate. Rs. c.	Per	Amount. Rs.
Excavation in foundation	620 cubic yards	2 0	cubic yard	1,240
Cement concrete	100 do.	20 5	do.	2,000
Masonry	450 do.	20 0	do.	9,000
Bed stones	45 cubic feet	2 0	cubic foot	90
Coping and caps	150 do.	1 50	do.	225
Girders delivered in Colombo	22½ tons	250 0	ton	5,625
Transport, erection, and painting of girders	22½ do.	100 0	do.	2,250
Teak timber	68 cubic feet	5 0	cubic foot	340
Excavation in inlet and outlet	200 cubic yards	1 0	cubic yard	200
Pitching	40 do.	9 0	do.	360
			Total	21,330

Detailed Estimate of Melang-ela Bridge at 21 Miles 66 Chains, one Span of 60 ft.

Description.	Quantity.	Rate. Rs. c.	Per	Amount. Rs.
Excavation in foundation ...	620 cubic yards	... 2 0	... cubic yard	... 1,240
Cement concrete ...	100 do.	... 20 0	... do.	... 2,000
Masonry	450 do.	... 20 0	... do.	... 9,000
Bedstones	45 cubic feet	... 2 0	... cubic foot	... 90
Coping and caps ...	150 do.	... 1 50	... do.	... 225
Girders delivered in Colombo ...	22½ tons	...250 0	... ton	... 5,625
Transport, erection, and painting of girders	22½ do.	...100 0	... do.	... 2,250
Teak timber	68 cubic feet	... 5 0	... cubic foot	... 340
Excavation in inlet and outlet ...	200 cubic yards	... 1 0	... cubic yard	... 200
Pitching	40 do.	... 10 0	... do.	... 400
			Total	... 21,370

Bridges: Rates for Work.

Items of Work.	Rates adopted. Rs.	Per	Particulars of Work to which the Rates are intended to apply.
Excavating foundation ...	2 0	... cubic yard	... Quantities taken with sides vertical and for nett area only, same as concrete; any sloping necessary to be allowed for in the rate. Rate includes filling around masonry with stones and rammed earth.
Concrete	20 0	... do.	... Cement concrete prepared in the usual way and rammed in layers.
Masonry in foundation ...	20 0	... do.	... Ordinary coursed rubble masonry of good quality.
Masonry in superstructure ...	20 0	... do.	... Ordinary coursed rubble masonry of good quality, including pointing.
Skew backs	1 50	... cubic foot	... Ashlar masonry.
Arching	1 50	... do.	... Dressed true to gauge and template extrados left rough. For first class work, including centres.
Coping	1 50	... do.	... In lengths of not less than 3 feet to have true and level bed, all exposed surfaces finished true.
Bed blocks	2 0	... do.	... Ashlar masonry or cement, 1 of cement and 1 of sand.
Timber	5 0	... do.	... Teak timber for girder beds, special sleepers, &c., including all carpenters' work on the same. Fitted and tarred complete.
Girders delivered at Maradana Junction	250 0	... ton	... Includes all charges for girders landed in Colombo and delivered at Maradana Junction.
Transport, erection, and painting	100 0	... do.	... Includes all charges on girders, including delivery at site, rivetting, erecting, &c., scraping, clearing, and painting (two coats).

Culverts: Rates for Work.

Items of Work.	Rates adopted. Rs. c.	Per	Particulars of Work to which the Rates are intended to apply.
Excavating foundation ...	1 0	... cubic yard	... Quantities taken with sides vertical and for nett area only, same as concrete; any sloping necessary to be allowed for in the rate. Rate includes filling around masonry with stones and rammed earth.
Concrete	20 0	... do.	... Cement concrete prepared in the usual way and rammed in layers.
Masonry in foundation ...	15 0	... do.	... Coursed rubble masonry of good quality.
Masonry in superstructure ...	15 0	... do.	... Coursed rubble masonry of good quality, including pointing. Cover stones to be laid with close joints and spread over with cement mortar to form a tight covering.
Skew backs	1 50	... cubic foot	... Ashlar masonry.
Arching	1 50	... do.	... Dressed true to gauge and template extrados left rough. For first class work, including centres.
Coping	1 50	... do.	... In lengths of not less than 3 feet to have true and level bed, all exposed surfaces finished true.
Trough corrugated steel flooring	310 0	... ton	... Includes all charges for steel flooring complete, landed in Colombo and delivered at Maradana Junction.
Transport, erection, and painting	50 0	... do.	... Includes all charges on steel flooring, including delivery at site, erecting, &c., scraping, clearing, and painting or tarring.
Pipes	10 0	... lineal foot	... For Doulton's stoneware pipes, 1 ft. 6 in. diameter, carefully laid and bedded, and joints filled with cement mortar, including head walls or pitching to banks at inlet and outlet.

Particulars of Weight of One Mile of Permanent Way Material.

Items.	Unit.	lb.	Number of Units in One Mile.	Percentage allowed for Loss, &c.	Quantities to be delivered per Mile.	
					Number of Units.	Weight in Tons.
24-ft. rails	Each	370·0	440	—	440	72·68
Fish plates	Pair	14·4	440	5	462	2·97
Fish bolts and nuts	Set of 4	3·3	440	5	462	·68
Holding down bolts with nuts, clips, and washers	Set of 4	11·6	440	5	462	2·39
Dog spikes	Set of 14	8·3	440	10	484	1·79
Jarrah sleepers	Each	101·0	1,980	5	2,079	93·74
				Total weight of material for one mile of single track ...		174·25

Cost of One Mile of Permanent Way Material.

Items.	Quantities to be delivered per Mile of Single Track	Price f.o.b.		Freight at 20s. per Ton.	Total English Charges.	At 1s. 4d. per Rupee.	Landing and delivering at Maradana at Rs. 4 per Ton.	Total per Mile.
		Per Ton.	Per Mile.					
	Tons.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	Rs.	Rs.	Rs.
24-ft. rails ...	72·68	5 10 0	399 14 10	72 13 7	472 8 5	7,086	291	7,377
Fish plates ...	2·97	7 10 0	22 5 6	2 19 5	25 4 11	379	12	391
Fish bolts and nuts ...	·68	16 10 0	11 4 5	0 13 7	11 18 0	179	3	182
Holding down bolts with nuts, clips, and washers	2·39	29 0 0	69 6 2	2 7 10	71 14 0	1,076	10	1,086
Dog spikes ...	1·79	15 10 0	27 14 10	1 15 10	29 10 8	443	7	450
	No.	Per each.						
Jarrah sleepers ...	2,079	0 3 0	311 17 0	—	311 17 0	4,678	375	55,053
Total ...	—	—	842 2 9	80 10 3	922 13 0	13,841	698	14,539

F. ELSON, Esq., to the ASSISTANT GOVERNMENT AGENT, Kegalla.

Yogama, Dehiowita, June 12, 1903.

SIR,—IN further reference to your Circular No. 855, I have the honour to point out that the difficulties attending the Algoda causeway would be eliminated were the Panawal korale tapped by the railway extension to Ratnapura. By crossing the Sitawaka river at the flood outlet embankment on the Dehiowita side of the 31st milepost a bridge of but a single span would be necessary, and by skirting the Ernan Hill and making stations at Panawal village and Hemingford two million pounds of tea would be tapped.

I understand that the engineers in charge of the trace are averse to the route proposed on the score of expense, but if all things are considered it might be advantageous to adopt the more expensive trace.

Yours faithfully,

F. ELSON.

The CHIEF RESIDENT ENGINEER, Kelani Valley Railway, to the GOVERNMENT AGENT, Province of Sabaragamuwa.

Colombo, August 20, 1903.

Report No. 220.

I HAVE inspected the trace indicated by Mr. Elson, and do not recommend its adoption. If a railway bridge were constructed over the Sitawaka-ganga at the 31st mile (road mileage), it would be necessary for the bridge to span the public road as well as the river, and I consider that not less than 240 feet total span would be required, or say one span of 120 feet and 2 spans of 60 feet each. This bridge would probably cost about Rs. 150,000.

The nature of the country from Hemingford Pass to Hemingford Gap and from Hemingford Gap to Pussella is such as to render the construction of a railway with curves and gradients similar to those which I propose for the Ratnapura Railway, impracticable, and even with considerably sharper curves and gradients the cost would be much greater than that of the corresponding section on the staked-out trace of the Ratnapura Railway.

J. PHILLIMORE,
Chief Resident Engineer.

The GOVERNMENT AGENT, Province of Sabaragamuwa, to the Hon. the COLONIAL SECRETARY.

No. 431/1,834.

Government Agent's Office,
Ratnapura, August 17, 1903.

Ratnapura Railway Extension.

SIR,—I HAVE the honour to report that my attention has recently been called to an alternative trace for the railway between Avisawella and Hemingford, which I am assured by Mr. Hyatt, manager of Glassel estate, has not been more than slightly examined by the engineer and is quite

easy. I annex a sketch* showing the approximate position of the group of estates near Glassel and the suggested line. Mr. Hyatt tells me that a station at Panawal village, close to Woodend estate, would assure the traffic of the group of estates, about 2,000,000 lb. of tea, exclusive of Hemingford. If this line is not taken, the bridge at Algoda (instead of the causeway) would be required and some road making. As to this please see my report No. 329 of 18th June, 1903, in reply to your letter No. 183/5,993 of 8th May, 1903. Mr. Hyatt went so far as to suggest that the estates might even give their land free for this line of railway.

I am, &c.,
G. S. SAXTON,
Government Agent.

The CHIEF RESIDENT ENGINEER, Kelani Valley Railway, to the Hon. the COLONIAL SECRETARY.

Colombo, August 26, 1903.

Report No. 44.

THE trace suggested by the Government Agent, Province of Sabaragamuwa, appears to be identical with that proposed by Mr. Elson in his letter of 12th June, 1903, to the Assistant Government Agent, Kegalla. This trace was carefully inspected by me, in company with Mr. M. Cole Bowen, Assistant Engineer, and Mr. H. G. Hickey, Surveyor, on the 17th, 18th, and 19th instants, and I enclose a copy of my report No. 220,* dated 20th August, 1903, to the Government Agent, Sabaragamuwa.

I am of opinion that a railway on the trace suggested by the Government Agent would be much more costly, both in construction and working, than the line to Ratnapura already staked out by me.

* * * * *

J. PHILLIMORE,
Chief Resident Engineer.

The Hon. the COLONIAL SECRETARY to the CROWN AGENTS FOR THE COLONIES.

Colonial Secretary's Office,
No. 36. Colombo, January 22, 1903.

GENTLEMEN,—I AM directed to state, for the information of the Consulting Engineers, that provision has been made in the Estimates of this year for a sum of Rs. 25,000 on account of the survey of the proposed extension of the Kelani Valley Railway to Ratnapura, and that Mr. Phillimore has been asked to submit proposals for carrying out the survey.

2. In this connection I am to inform you that a motion was made in the Legislative Council that, as the cost of working and upkeep of the existing line is largely increased by the number and severity of the curves, instructions should be given to minimize the curves as much as possible, even at increase of the initial cost. It was explained in answer to the motion that as the country through which the Ratnapura Line will pass is broken, and the prospects of traffic not very large, adoption of the recommendation of the motion would render the cost of the proposed line prohibitive, and would also defeat the main object of the adoption of the 2-feet 6-inch gauge on the Kelani Valley, viz., to obtain greater flexibility. It was, however, explained that it would be arranged by Mr. Phillimore that no curves should be put in by surveyors on the proposed line without having first been sanctioned by him, and that in grading the section a certain amount of compensation for curves would be allowed, *i.e.*, that where a grade occurred on a curve the gradient would be reduced in proportion to the sharpness of the curve. Under these circumstances, I am to request that the proposed survey should be planned so that when economy by the construction of a short curve is neutralized by additional cost in working the railway in consequence of the adoption of the more acute curve, preference should, other things being equal, be given to the flatter curves, and to ask that the attention of the Consulting Engineers should be especially invited to the points above referred to.

I have, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 5.

The GOVERNMENT AGENT, Province of Sabaragamuwa, to the Hon. the COLONIAL SECRETARY.

Ratnapura Kachcheri,
No. 1,834. October 30, 1903.

Ratnapura Railway.

SIR,—I HAVE the honour to forward the report of the Ratnapura Railway Committee appointed by your letter No. 05037 of 23rd April last.

I am, &c.,
G. SAXTON,
Government Agent.

---

* See page 20.

Enclosure in No. 5.

REPORT OF THE KELANI VALLEY RAILWAY COMMITTEE.

1. *Object of Inquiry.* — By letter of the 23rd April, 1903, we were appointed by His Excellency the Governor a Committee to collect statistics and report on the amount of traffic which would be secured by the proposed extension of the Kelani Valley Railway to Ratnapura, and also on profits likely to result therefrom. On the 8th May we were also desired to consider and report on the extra traffic that would be likely to be brought to the Ratnapura Railway if it were extended to Pelmadulla. By letter of the 22nd May we were informed that the Governor considered that precautions will have to be taken that the railway to Ratnapura, if constructed, will not compete with the Main Line, and we were requested to consider what those precautions should be, and to furnish a report thereon.

The Committee have had four meetings, viz., on the 27th June, 29th August, 3rd and 24th October, besides inquiries at Balangoda on the 22nd July and Rakwana on the 28th July. We attach copy of minutes of our meetings and inquiries. We were advised that it would probably be best not to attempt to take traffic tallies on the road and the river on account of the time that would be required for it, and in discussing this point we came to the conclusion that owing to the varying conditions of the river a tally for a few months would be practically of no use.

The Chairman when in Colombo called at the office of the General Manager of the Railway, and was kindly supplied with figures and information.

2. *Maps.*—The Surveyor-General kindly supplied us with a map of the country, which is attached to this report (see Annexure B).* We also attach copy of a map of the Ratnapura District (see Annexure C).*

3. *Trace.*—The question of trace has been worked out (see Sessional Paper XVI. of 1901 in the volume for 1900). An alternative trace was afterwards suggested through the group of estates near Glassel with a station at Woodend or Panawal. This was not considered desirable owing to the expensive nature of the work near Hemingford estate.

4. *Population of District.*—The area of the Ratnapura District is 1,259 square miles; its population is 132,964, made up as follows :—

Local Board ...	4,084	Kukulu Korale ...	7,613
Kuruwiti Korale	29,427	Meda Korale ...	13,518
Nawadun Korale	23,814	Estates ...	16,642
Atakalan Korale	17,877		
Kadawat Korale	9,696		132,964
Kolonna Korale	10,293		

Some portion of the Panawal korale in Kegalla District, with 6,362 people, would be affected. They would use Kendangomuwa station.

Tamils on Estates.—The Census figures (Volume II., pages 615 and 616) give the following number of Tamils on estates :—

	Males.	Females.
Kuruwiti Korale	716	542
Nawadun Korale	1,821	1,375
Atakalan Korale	1,300	1,176
Kadawat Korale	1,827	1,537
Kolonna Korale	996	803
Kukulu Korale...	693	562
Meda Korale	1,012	788
	8,365†	6,783†
	15,148	
Deduct as not using the railway—		
Hayes	467	
Pannilkanda	367	
Galatura	399	
Galpottegama	124	
Madabaddara	311	
	1,668‡	
	13,480	

This figure may be compared with our estimate of 12,512, as showing the latter is well within the mark.

5. *Rates.*—We understand from the General Manager's letter No. 1,716 of 6th June that the rates to be charged for both goods and passengers will be the same as charged on the portion of the Kelani Valley Line now open, and we give these rates below :—

Passenger Fares.

	Cents.
First single ...	8
Second single ...	5⅓
Third single ...	2⅔
First return ...	12
Second return ...	8
Third return ...	4
Coolies' single ...	1¼
Minimum	25

Goods Rates, per Ton per Mile.

	Cents.
First Class ...	37½
Second Class ...	25
Third Class ...	17
Fourth Class ...	12½
Fifth Class ...	10
Sixth Class ...	8
Tea	12½
Rice	17
Tea packing, third ...	17
Do. sixth ...	8
Manure, third ...	17
Do. sixth ...	8

* Not reproduced † See page 602, Vol. II., Census Report. ‡ From last quarterly returns.

Comparison of Rail and Boat Rates.—The following statement compares railway freight with the present freight by boat :—

Goods.	Rates, per Ton per Mile.	Railway Charge for 64 Miles to Ratnapura. Rs. c.	Boat Charge. Rs. c.
First Class	37½	24 0 ...	Say, Rs. 10 Up and Rs. 5 Down
Second Class	25 ...	16 0	—
Third Class	17 ...	10 88 ...	—
Fourth Class	12½ ...	8 0 ...	—
Fifth Class	10 ...	6 40 ...	—
Sixth Class	8 ...	5 12 ...	—
Tea	12½ ...	8 0 ...	11 12*
Rice	17 ...	10 88 ...	8 75†
Wrought timber	12½ ...	8 0 ...	6 0

* At ½ cent a pound. † At 25 cents a bushel.

6. *Estate Returns.*—Forms of inquiry were sent out to each estate in the district, and when these were received they were sent to the Chairmen of the various Planters' Associations, who were kind enough to check them for us, and we think that the results arrived at may be taken as very fairly accurate. We beg to thank the Associations for their assistance in this matter.

7. *Boutique Returns.*—The boutique returns were, of course, not so easy to get accurately. They were filled up from all the chief towns and from the roadside boutiques on the road to Avisawella. We found that in many cases the figures were no better than guess work, but they were all checked carefully afterwards, as far as it was possible to check them, and the figures given were compared with those in the boutique Cash Account Books; so that, as far as possible, we did our best to get them accurate.

8. *Statement of Tolls.*—The following is a statement of sales of toll rents for the last four years on the road from Balangoda and Rakwana to Avisawella :—

	1900. Rs.	1901. Rs.	1902. Rs.	1903. Rs.
(1) Toll at Kuruwita bridge (2) Getahetta bridge (3) Bilihul-oya bridge (4) Road toll between the 58th and 59th mileposts, Ketandola (5) Road toll between the 65th and 66th mileposts, Patakada (6) Road toll between the 72nd and 73rd mileposts, Hunuwala	15,200 ...	14,026 ...	9,500* ...	12,000
(7) Toll at Kahawatta bridge	1,950 ...	1,960 ...	1,146† ...	1,150

* Balangoda road toll abolished in 1902. † Rakwana road toll abolished in 1902.

These tolls are all sold together, except that of Kahawatta, so that it is impossible to make any estimate of traffic from them. In the case of Kahawatta, which lies between Pelmadulla and Rakwana and catches all the Rakwana traffic separately, some estimate may be made.

	Rs.
This toll sells for	1,150
Add Rs. 15 a month for toll-keeper	180
10 per cent. profit for the renter	115
	1,445
Deduct for small local traffic, hackeries, bicycles, &c.	100
	1,345

This represents 2,690 loaded carts at 50 cents a cart, or 4,035 tons at 1½ ton per cart load. The figure may be compared with the Rakwana estate estimate for estate produce and rice only, amounting to 1,880 tons, and shows a very considerable native traffic.

9. *Cart Competition.*—We think cart competition need not be feared. On page 14 of the Kelani Valley Commission Report we note that Mr. Pearce (late General Manager) wrote : "I do not believe in cart competition over long distances." To Ratnapura at present the river carries most of the traffic, and it is from the river that the most dangerous competition would come. Carts, for instance, charge 50 cents per bushel for rice, *i.e.*, Rs. 17·50 per ton to Ratnapura.

10. *River Traffic.*—A glance at the map shows that the Kalu-ganga, which flows through Ratnapura, is a very useful means of conveying goods to the sea coast and the railway at Kalutara. It is navigable for large boats as far as Ratnapura, and is connected with Colombo by canal from Kalutara. This river, and the one cart road to Colombo through Avisawella are the two main channels by which communication is held with Colombo, and the Committee have no doubt that the main difficulty with which the railway will have to compete will be the competition of the river. The river brings up now a great deal more traffic than the road. It is difficult to estimate exactly the amount of river traffic. The produce brought up by the river is chiefly rice, salt, sundries, cocoanuts, and fish. These are the most important items. The chief items of down traffic are arecanuts, timber, and tea. The Committee feel that if the down tea traffic and the up rice traffic were secured by the Railway, there would be little inducement for the boats to ply their trade. They will not come up unless they have freight to carry down.

Attempts at estimating River Traffic.—From a Forest Guard stationed on the river and from a storekeeper at the Ratnapura landing place we obtained estimates of the number of padda boats coming up all the way to Ratnapura. They both agreed that about twenty-five a month was the number. Taking 12 tons as the average weight of cargo, this would give (50 by 12 by 12) 7,200 tons up and down per annum. The same people estimated ten double canoes per month, carrying passengers

back. Their average cargo would be 1½ ton; this gives (10 by 12 by 1½) 180 tons. Total 7,380 tons to and from Ratnapura town alone. We cannot accept this as sufficient. We quote the figures as showing the difficulty of arriving at correct data.

It seems certain that a boat could not make more than eight or nine trips in a year between Colombo and Ratnapura if it was fully employed all the year round, allowing for the usual delays in getting cargo, and if it did nothing but the complete journey. We know the number of boats licensed at the different Kachcheries to ply on the Kalu-ganga: it is 136. Assuming they each made nine trips and carried 12 tons, we should have (136 by 9 by 2 by 12) 29,376 tons to and from Ratnapura by river alone (not counting the road). These speculative figures may be compared with our estimate of the total tonnage to and from Ratnapura only, *i.e.*, 17,148 tons, plus an unknown quantity of firewood and plumbago, and allowance being made for some cart traffic.

11. *Number of Boats.*—We ascertained that the following number of boats have been licensed at the different Kachcheries for 1902 to ply on the Kalu-ganga:—

	Padda Boats.	Canoes.
Colombo Kachcheri	72 ...	—
Kalutara Kachcheri	16 ...	8
Ratnapura Kacheheri	48 ...	11
	136	19

Capacity of Boats.—The cost of a good padda boat may run up to Rs. 1,400. We measured several large-sized padda boats, the average length and breadth of which for packing purposes was 23 ft. by 9 ft. 9 in. For rice this would be packed to a height of 3 ft. 2 in.; tea boxes would be loaded up to a height of 5 ft. This gives 710 and 1,121 cubic feet respectively of packing room. A full load of rice will be about 500 bushels, or 14½ tons. From 230 to 250 tea boxes weighing 100 or 120 lb. each will be carried. Sixteen tons would appear to be an outside load. Of plumbago, for instance, 16 tons would be carried. Perhaps 12 tons would be an average load carried. Tea boxes appear to be of two sizes, of 2·84 and 5 cubic feet, the former marked nett 50 lb., the latter nett 105 lb.

Number of Trips.—Boats are very much delayed, both when the river is low and when the river is in flood. In the latter case there are bridges over the canal between Kalutara and Colombo under which it is impossible sometimes to pass when there is high water. About 18 miles from Ratnapura the river passes over some rapids at Ellagawa, and with low water there are several places where unloading is necessary. With a low river a journey up may take six weeks. With the river in flood a journey up may take a month. We do not think that a boat plying regularly all the year round between Colombo and Ratnapura only would do more than eight or nine trips in twelve months. Boats may take freight to intermediate places, and may even go up the Puttalam canal or the Kelani river.

Crew.—The crew for a full-sized padda boat would appear to be eight men including the cook.

Freight.—The boatmen stated that the freight for rice was Rs. 20 per 100 bushels, running up to Rs. 25 or Rs. 26 per 100 bushels if boats were scarce. Mr. H. S. Pieris of Ratnapura told us that Rs. 25 per 100 bushels was about the average cost. He himself owns two large boats, originally costing Rs. 1,000 each. He hires his boats out at Rs. 200 a year each. Fifteen days he gives us as a fast journey from Colombo. As an average, the freight per ton up and down is Rs. 10 and Rs. 5 respectively.

TRAFFIC, RICE AND TEA.

12. *Estimate of Consumption of Rice on Estates.*—The returns from various superintendents gave very varying figures for consumption of rice per head, varying from 7 to 20 bushels. The figures we have accepted work out to almost 11 bushels a head of the estimated Tamil labour force. The estate figures in some of the superintendents' returns include other than immigrant Tamils. As a check on our accepted estimate, we may follow the means of comparison given by the Kelani Valley Commission on page 36 of their report, from which we get the following figures:—

	Bushels.	Tons.
(1) On 3 bushels to 100 lb. of made tea	177,855 ...	5,081
(2) On the Hatton basis of 2·80 bushels	165,998 ...	4,743
(3) On the Kelani Valley Commission estimate of 9½ bushels a head	118,864 ...	3,396
(4) On our estimate of 10·95 bushels a head, Tamil coolies only	137,016 ...	3,915
(5) On an estimate given by the Accountant of the Railway of 1½ ton rice to 1 ton made tea, adding, say, 20 per cent. for packing	— ...	3,176

Rice for Non-Estate Population.—The Committee have always felt that the most important item of up traffic which the railway must do its best to secure is that of rice, and we have done our best to arrive at accuracy in our figures for the total required for the district. According to the estate returns the estates will require 137,016 bushels, or 3,915 tons. The boutique returns have been checked as far as possible with the cart and boat invoices. We have taken care to prevent items being calculated twice over. The boutique returns include those of the chetties, who contract to supply the estate rice, so that the boutique figures should give us the total required for coolies and the rest of the population.

The memoranda which will be found attached to minutes of our proceedings give figures from the Blue Book and Census Report. The former figures are of course not entitled to absolute confidence, but they are the only figures we could get on the subject. They are the only means we have of arriving at an estimate of what the people of the district produce for themselves. They have their paddy fields and their chenas to supply them with the grain they require. Any other grain they eat must be imported from outside. All the chief headmen testify to the fact that their people consume a very large proportion of Coast rice. The figures in the memoranda show that the estimates the chief headmen make are not much exaggerated. It is doubtless the fact that there is a very considerable quantity of rice imported into the district in addition to that required by the estates. The returns

give us about 3,986 tons, or 139,516 bushels, required for the population other than estates. This is only at the rate of $1\frac{1}{5}$ bushel per head for that population. This seems small enough; we should have expected this amount to have been larger. We think this is, as we have stated in our minutes, a very safe figure for the railway to count upon.

Cost of Transport of Rice.—We examined several witnesses on the important point of the cost of bringing up rice to Ratnapura. Nearly all of it is brought by boat. By cart it costs 50 cents a bushel delivered at Ratnapura; by boat the lowest freight mentioned was 20 cents a bushel, the highest 30 cents a bushel. We believe the general freight paid is 25 cents a bushel. This was the figure quoted by Mr. P. D. G. Clark, who is in charge of a large acreage of tea. The cost per ton delivered at Ratnapura by boat is Rs. 8·75. The railway at 17 cents per ton for 64 miles would charge Rs. 10·88, *i.e.*, Rs. 2·13 more per ton, or 6 cents more per bushel. It will be of course of very great importance to the railway to see that this difference of Rs. 2·13 per ton does not lose them the rice up traffic. They would have much to help them in this competition. The boats would, we hope, lose their tea down traffic, and there would not be the same inducement to keep to the river. They would have to raise their charges coming up to make up for what they lose going down. At present the competition among the boats is pretty severe. We do not think that the rates charged by the boats could be reduced to any appreciable extent. What would chiefly assist the railway in this competition would be the great delay at present experienced by all those who have to depend on the boat transport. The planters whom we examined on this point complained of the serious delay that they were subjected to; the native traders experienced the same inconvenience. They will appreciate rapid transit as much as the planters, and we do not think that the railway should have any difficulty in persuading everybody to carry their rice by rail.

Down Traffic in Tea.—The question whether the planters will use the railway in preference to river or road is of course of all-importance. From the replies received to our circulars it is clear that the unanimous opinion of all superintendents and managers was that they would prefer the railway. From the opinions expressed by the planters at Balangoda and Rakwana it is clear that the planting community is prepared to pay even a little more for their combined up and down traffic than they do now, in view of the extra speed and safety which the railway would secure for them. They transport their tea from Balangoda to Colombo, or from Rakwana to Colombo for 1 cent a pound nett. Mr. Clark states that from Ratnapura to Colombo the tea costs $\frac{1}{2}$ cent a pound nett. At this rate the railway figures have an advantage. It is the general opinion that rapidity of transport would lead to everybody sending down their tea by railway.

Cost of Transport of Rice Up and Tea Down.

Transport of Rice and Tea considered together.—The present boat charges for the estimated figures of estate rice and tea are as follows:—

	Rs.	c.
(1) Rice, 137,016 bushels at 25 cents a bushel	34,254	0
(2) The lowest estimate of cost would be that taken at the highest figure given for the number of bushels carried, and the lowest charge for a big boat, *i.e.*, 650 bushels, for Rs. 120. At this rate the cost of transporting 137,016 bushels would be	25,295	0

The former figure is about what the contractor pays in Ratnapura. Mr. Clark says he pays that figure for his rice in Ratnapura.

	Rs.	c.
(3) Tea: Mr. Clark actually pays for tea from Ratnapura delivered in Colombo $\frac{1}{2}$ cent a pound nett, *i.e.*, for 6,000,000 lb. ...	30,000	0
(4) A big boat carries 230 chests weighing 125 lb., *i.e.*, 230 × 125 = 28,750 lb., or $12\frac{1}{2}$ tons gross of tea for, say, Rs. 60. This gives the cost delivered in Colombo of 6,000,000 lb. nett of tea, or 7,200,000 lb. gross, at ...	15,026	0

We take it that the planters would under present arrangements pay—

For rice	Rs.	34,254
For tea	,,	30,000
		64,254 0

The railway would carry this for the following figures:—

137,016 bushels, or 3,915 tons, at Rs. 10·88 per ton	42,595	20
6,000,000 lb. of tea, plus 20 per cent. for packing, 7,200,000 lb., 3,214 tons at $12\frac{1}{2}$ cents per ton for 64 miles, *i.e.*, at Rs. 8 a ton ...	25,712	0
Add cost of delivery of rice to station in Colombo at 50 cents per $1\frac{1}{2}$ ton, or 33 cents per ton	1,291	95
Add cost of delivery of tea in Colombo at same rate	1,060	62
Total ...	70,659	77
The difference to be paid by the planters would be	6,405	77
Say, Rs. 6,400, or ·166 of a cent per pound.		

There can be no doubt they would pay this small extra charge gladly enough, but they would have to insist on their contractors using the railway and nothing else.

Enhanced Cost of Rice by Railway.—The above considers the transport of tea and rice combined from the estate point of view. Taking the cost of transport of rice only at Ratnapura, the raising of the cost from Rs. 34,000 to Rs. 44,000 raises the cost of transport from 25 to $32\frac{1}{2}$ cents per bushel. This would raise the price of rice at Ratnapura by $3\frac{7}{8}$, or say $\frac{1}{4}$ cent a measure. The average price of rice may be taken now as 12 to 14 cents a measure.

COACHING TRAFFIC.

13. *Local Traffic, Passengers and Goods.*—It is a noticeable fact that numbers of hackeries now ply on the Colombo road between the toll stations, as in the low-country; and the Provincial Engineer says that the state of the road clearly points to increased traffic since the line was opened to Avisawella. There is also some local goods traffic, for instance, fruit from the eastern end of the district towards Ratnapura. Mr. Greenshields and the Chairman one morning met a number of carts with plantains, &c., coming down from Pelmadulla. This fruit, we were informed, does not go beyond Ratnapura. There would also be local traffic in timber of all kinds, and transport of timber for tea boxes to the estates. We have made no allowance for increase of population, or for the natural increase of garden cultivation, which may be expected along the line, as is observed on the line to Kandy. We might here also note that we have entered nothing in our returns on account of the cultivation of rubber, though that promises to be an important feature in a few years' time.

Number of Pilgrims.—An important item in the passenger traffic on this line would be the number of pilgrims who now attend the shrine at Adam's Peak in the beginning of the year, that is, from February to May. This pilgrimage attracts Buddhists in thousands every year. The mountain is approached on the north by roads through Maskeliya, and the Main Line as far as Hatton is used by large numbers of the pilgrims. On the south side, that is, the Ratnapura side, the ascent is much more difficult. Ratnapura is only 95 feet above sea level, and the peak 7,200 feet. There are two or three paths from the main road, *i.e.*, from Kuruwita, Tembiliyana, Higgashena, passing through and near Eratna.

People from the Kalutara District come along the Panadure road, and use the Ratnapura-Gilimale path. From Kegalla District and from the districts near Colombo the people use the paths through Eratna. A large number of them return by the river, the usual rate for a passenger from Ratnapura to Kalutara being Re. 1 or 75 cents. Double canoes carry a great deal of this down passenger traffic, though the padda boats take their complement of returning pilgrims. A railway to Ratnapura would perhaps take off some of the pilgrim traffic from Hatton, but, on the other hand, it must be remembered that the climb on the Ratnapura side is a serious undertaking. The Hatton route would be the more comfortable.

The Committee tried to get some estimate of the number making this pilgrimage on the southern side. Mr. A. E. B. Stiven, who had lived for many years close to one of the main routes, gave us an estimate of 30,000. The Committee thought that 20,000 would be a very safe estimate. Whether the railway could carry all these numbers of pilgrims is a matter for the consideration of others. Unfortunately, they go in gangs on particular days, that is, their *poya* days. The number of pilgrims would not be evenly distributed over the whole period of the pilgrimage.

Paragraph 8 of Mr. Wylie's report of 2nd June to the General Manager runs as follows :—

> We do not allow any special rates to pilgrims, and we keep no record of their number. It is not advisable to grant any reduction in the rates to induce pilgrims to use the Kelani Valley Line, as the loss to Government on the other parts of the line would be far greater than could possibly be compensated by any increase of earnings on the Kelani Valley Line.

Estimate of Coaching Traffic.—We collected figures of the population within 5 miles of the trace of the railway, but we were advised by the railway authorities that it would be more satisfactory to estimate this kind of traffic in another way.

Paragraph 2 of Mr. Wylie's letter No. 6,843 of 2nd June to the General Manager runs as follows :—

> The question of the estimation of passenger earnings for a new line of railway has always proved a difficult one to deal with. For the compilation of an estimate for the proposed line from Colombo to Chilaw the population within 5 miles on each side of the proposed line was taken, but the fallacy of a calculation on this basis is clearly shown in the report of the Kelani Valley Commission, *vide* pages 32 to 34 of Sessional Paper XXII. of 1895, in which they state : "We find that the passenger traffic at none of the established stations bears any fixed ratio to the population of which it is the centre."
>
> When railway officers are asked to estimate passenger traffic receipts for a new line, they generally take the actual earnings on a section of the line already open for traffic which serves a district most nearly resembling the one for which an estimate is required ; or failing a suitable comparison on any one section, they take the actual receipts at such stations on the open lines as compare most favourably with corresponding stations on the proposed new line.

The following figures give the earnings from coaching, that is, passengers and parcels traffic, per mile of line open per annum for 1902 :—

	Rs.		Rs.
Coast Line ...	... 12,067	Matale ...	... 5,929
Main Line ...	... 13,218	Kurunegala ...	... 4,231
Nawalapitiya to Nanu-oya	... 8,032	Kelani Valley ...	... 4,253
Nanu-oya to Bandarawela	... 3,088	Jaffna ...	... 1,293

Average of all lines, Rs. 9,462.

The Committee considers that Rs. 4,000 per mile per annum would be a safe estimate to take under this item.

We are of opinion that the large immigrant population from Kalutara District and southwards would use the railway instead of walking. There would be a number of people who would come to the district, who, without a railway, would not come here. There would also be some considerable parcels traffic, now brought by carts all the way from Colombo. We therefore think that additional traffic would be thrown on the section between Colombo and Avisawella, which we may fairly estimate at Rs. 300 per mile, and we have added (300 by 37) Rs. 11,100 to our estimate on this account.

14. *Estimate of Division of Traffic between Railway and Boats. Up Traffic.*—Of the total figures Up, we estimate as below what we think the railway ought to succeed in obtaining :—

	For Railway. Tons.	For Boats. Tons.
Column 1 of *Annexure G*	— ...	—
olumn 2 :—		
Liquor, the whole	181 ...	—
Cloth, do.	128 ...	—
Plateware, &c., the whole	52 ...	—
Glassware, do.	10 ...	—
Oilmanstores, do.	118 ...	—
Kerosine oil, half	88 ...	88
Column 3 :—		
Estate rice, the whole	3,820 ...	—
Column 4 :—		
Rice, for Sinhalese, half	1,665 ...	1,666
Column 5 :—		
Fish, half	271 ...	272
Tobacco, the whole	134 ...	—
Sugar, do.	153 ...	—
Column 6 :—		
Salt, half	555 ...	556
Column 7 :—The whole, the railway being cheaper ...	44 ...	—
Column 8	— ...	—
Column 9 :—		
The whole, the railway being cheaper, except all the cocoanuts ...	1,227 ...	115
Column 10 :— do. do. ...	— ...	—
Column 11 :— do. do. ...	534 ...	—
Column 12 :— do. do. ...	474 ...	—
Column 13 :— do. do. ...	239 ...	—
For Ratnapura only	9,693	2,697
The whole of the traffic at the other stations ...	1,647	—
	11,340	2,697
Grand Total Up	14,037	

Down Traffic.—Of the total Down traffic, we think the railway should get the items below :—

	For Railway. Tons.	For Boats. Tons.
Column 3 of *Annexure H* :—		
Estate produce	25 ...	—
Column 4 :—		
Tea	3,088 ...	—
Of 652 tons of wrought timber	100 ...	552
Column 6 :—		
Arecanuts	— ...	603
Column 7 :—		
Kitul fibre	— ...	21
Mica, the whole	4 ...	—
Column 9 :—		
Of the large quanity of plumbago, the railway should secure 160 tons, being estate produce ; and, say, 200 from the native-owned mines	360 ...	—
Ratnapura only	3,577	1,176
All from other stations	739	—
	4,316	1,176
Grand Total Down	5,492	

15. *Final Estimate.*—Our final estimate of what we think the railway should obtain and of the revenue obtainable is found in the Annexures G and H, in the same form as that drawn up by the Commission on the Kelani Valley Railway at page 51 of their report (Sessional Paper XXII. of 1895). The summary is as follows :—

	Tonnage.	Value. Rs.	c.
Traffic up	11,340 ...	108,997	4
Traffic down	4,312 ...	31,235	38
Coaching traffic at Rs. 4,000 a mile, Avisawella to Ratnapura	— ...	108,000	0
Additional coaching traffic at Rs. 300 between Colombo and Avisawella, 37 miles	— ...	11,100	0
Total ...	15,656	259,332	42

Estimate of Profit.—The Chief Resident Engineer, Kelani Valley Railway, gives the following figures as to cost of the railway to Ratnapura :—

	Rs.
Total cost Rs. 2,928,145, equal to Rs. 108,450 per mile, on which the charge for interest and sinking fund at 4 per cent. is	117,126
The General Manager estimates working expenses, including the cost of the additional traffic, at	137,626
Total ...	254,752
Our estimate totals up to	259,332
Nett Profit ...	4,580

With regard to the item for working expenses, the General Manager informs us that he has calculated his estimate for maintenance of permanent way on an average for the first ten years after the opening of the line. If calculated on the average of the first four years, there would be a reduction of Rs. 14,283 per annum, which would bring the nett profit up to Rs. 18,863.

16. *Diversion of Traffic from Main Line.*—A question was raised by the Consulting Engineers that it was quite possible that estates near Haldummulla and Haputale might be tempted by a railway, either to Ratnapura or Pelmadulla, to take their produce off the Main Line from Haputale station; and we were asked to report on this point. The following correspondence was placed at our disposal :—

Colonial Secretary's letter No. 166 of 29th April to the Government Agent.
Government Agent's No. 276 of 19th May to the Hon. the Colonial Secretary.
No. 655 of 17th June from the General Manager, Ceylon Government Railway, to the Hon. the Colonial Secretary.
No. 64 of 6th May from the Chief Resident Engineer to Government.

Mr. Hill on behalf of the Committee made an independent inquiry. His report of 29th July showed that he had come to the same conclusion as the Government officers on this particular point. We think there is no fear that any traffic from the Haputale side would be diverted from the Main Line to the proposed extension, even if it went to Pelmadulla. Mr. Hill's letter of 29th July is as follows :—

G. S. Saxton, Esq., Government Agent,
Chairman, Ratnapura Railway Committee,
Ratnapura.

Keenagaha Ella, Balangoda,
July 29, 1903.

SIR,—IN continuation of my letter of the 9th July and in further reply to yours No. 9/834 of the 7th July, I have the honour to state that I wrote to nine superintendents of estates I thought would use the railway, and from the replies I gather that it would not pay them to use the railway either at Pelmadulla or Ratnapura. The only estate beyond those in the Balangoda district is one called Yelatenna in the West Haputale district, but from the figures given me I find it would cost them about Rs. 10 a ton more to send down their tea, and that they deliver their rice on the estate at present cheaper than they could possibly do by the new route. Further, this estate is only 118 acres, and need not really be taken into account. West Haputale estate queried the rates, but as their railway station is Ohiya, the balance in favour of the Main Line is still more marked. The rest of the replies are to the effect that the new route is out of the question.

I think the figures supplied by the General Manager, Ceylon Government Railway, as to the relative cost of rail and cart approximately correct. I would add that there is generally difficulty in getting carts to transport the tea, though why this should be so is not easily explained.

Your obedient servant,
J. HILL.

EXTENSION TO PELMADULLA.

17. *Trace and Population served.*—The extension to Pelmadulla cannot be taken, owing to steep gradients, along the present line of road. It takes a more northerly direction, crossing the river at Malwala, about three miles above the present bridge; it then approaches Galboda estate, and in reaching Pelmadulla does not pass through the populated part of the Nawadun korale. It would tap a portion of Kuruwiti and Nawadun korales, the whole of the Meda, Kadawat, Atakalan, and Kolonna korales. Parts of the last three form what is called the Bintenna, where the people are poor. It would affect almost all the estates. The population affected may be roughly taken as below :—

Part of Kuruwiti Korale	500
Do. Nawadun Korale	2,000
Whole of Atakalan Korale	17,877
Do. Kadawat Korale	9,696
Do. Kolonna Korale	10,293
Do. Meda Korale	13,518
Estates	15,000
Total ...	68,884

Roughly speaking, this is half the population. The two large bazaars of Rakwana and Balangoda are included, and the large planting district of the Bambarabotuwa valley.

It is proposed to have two stations, *i.e.*, at Malwala and Pelmadulla, respectively $67\frac{3}{4}$ and $78\frac{1}{2}$ miles from Colombo, *i.e.*, 3 and 15 miles from Ratnapura.

Malwala Station.—Of the estates given as using Ratnapura station, the following would not use the extension :—

	Tea. Tons.	Rice. Tons.	Manure. Tons.	Estate Sundries. Tons.
Palm Garden, Mahawala, Kosgala, Walgampola, Galkaduwa	220	284	96	11

These deducted from the Ratnapura Planters' Association return would give the figure for estates using Malwala station. For Malwala for estates we have therefore—

	Tea. Tons.	Rice. Tons.	Manure. Tons.	Sundries. Tons.
Total of Ratnapura Planters' Association returns	683	924	106	206
Deduct	220	284	96	11
Balance for Malwala station	463* nett	640	10	195

* Equals 555 tons gross.

The estimated Tamil labour force is 2,197, and the estate population may be taken at 2,500. Villagers using that station would be about 1,000. Total population 3,500, or, say one-thirtieth of the total using Ratnapura. At the rate of 1½ bushel of rice per head, this population would require 4,200 bushels, or 120 tons. Only half of this has been credited to railway, but we think the whole would come by railway. We may therefore take the tonnage and revenue at this station on the following basis :—

	Tons.
Tea	555
Rice	700
Manure	10
Sundries for estates	195

and add one-thirtieth of the Ratnapura figure under other heads, add also 60 tons of rice on 64 miles. The station is 67 miles from Colombo, 3 miles from Ratnapura.

We thus get the following as the additional traffic thrown on to the railway at Malwala :—

	Miles.	Tons.	Value. Rs. c.
Up.			
Rice, at 17 cents	3 ...	760 ...	387 60
Additional rice, *i.e.*, 60 tons up to Ratnapura ...	64 ...	— ...	652 80
Manure, at 8 cents	3 ...	10 ...	2 40
Estate sundries, at 8 cents	3 ...	195 ...	46 80
One-thirtieth of goods at Ratnapura station ...	3 ...	162 ...	79 0*
Total Up Traffic ...		1,067	1,168 60
Down.			
Tea, at 12½ cents	3 ...	555 ...	208 17
One-thirtieth of goods at Ratnapura station ...	3 ...	13 ...	3 30†
Total Down Traffic ...		568	211 47
Total Up and Down Traffic		1,635	1,380 7

* *I.e.*, $\frac{3}{64}$ of $\frac{1}{30}$ of Rs. 50,975. † *I.e.*, $\frac{3}{64}$ of $\frac{1}{30}$ of Rs. 2,147.

Pelmadulla Station, Up Traffic.—For Pelmadulla station we should include all the returns from Balangoda and Rakwana, both for estates and bazaars. The population using the station would be—

Part of Nawadun Korale	3,000
Whole of Atakalan Korale	17,877
Do. Kadawat Korale	9,696
Do. Kolonna Korale	10,293
Do. Meda Korale	13,518
Estates	12,000
Total ...	66,384

We are entitled to assume that all the traffic would go by railway, as it is not likely that goods would be taken as far as Ratnapura by river to be carried on 12 miles by road, instead of being taken direct by rail. We have elsewhere only credited to the railway half the following: Kerosine oil, rice for non-estate population, salt, and fish. In this return therefore we add half of these goods to credit of railway between Colombo and Ratnapura. For cocoanuts we add rail freight between Ratnapura and Pelmadulla. Our estimates are for 66,000 people, *i.e.*, for half the total population.

Pelmadulla Station, Down Traffic: Arecanuts.—The traders could land their 117 tons in Colombo by rail for Rs. 9·87 a ton from Pelmadulla. From this place to Ratnapura is 12 miles. The cost per ton would be, say, Rs. 6; add Rs. 5 by river to Colombo, Rs. 11. We therefore think the trader would prefer the rail, and we credit all this traffic to the railway. We add a further 50 tons as a low estimate from the district round Pelmadulla. Total 167 tons.

Plumbago.—We have included 160 tons from Springwood estate. There is a considerable quantity of this mineral in the Rakwana district. It would cost from Pelmadulla to Colombo Rs. 6·32. No carts or river could compete with this, and we think a great deal of plumbago would go by rail. We estimate 800 tons for this. The Rakwana traders gave us 940 tons.

Timber.—Most of this comes from below Pelmadulla; still there would be an appreciable quantity from these parts. We allow 100 tons of wrought timber from this station.

Fruit and Garden Produce.—There would be a considerable quantity of this produce going down as far as Ratnapura. This would perhaps be credited under head "Coaching," so we add nothing on this account.

We thus get the two following statements for Up and Down traffic at Pelmadulla :—

Up Traffic, Pelmadulla (Additional).

	Tons.	Rates. Cents.	Miles.	Value Rs. c.
Rice from estate returns	2,900 ...	17 ...	15 ...	—
Rice, 1 bushel per head, for balance of population, *i.e.*, 54,000	1,543 ...	17 ...	15 ...	—
Additional freight on half of this, *i.e.*, 771 tons from Colombo to Ratnapura ...	— ...	17 ...	64 ...	—

	Tons.	Rates. Cents.	Miles.	Value. Rs. c.
Salt, 21 lb. per head, for 61,000 people, deducting 5,000 for part of Kolonna korale ...	616	17	15	—
Add freight on half of this, Colombo to Ratnapura, *i.e.*, 308 tons	—	17	64	—
Dried fish, half total	323	17	15	—
Add freight on half of this, Colombo to Ratnapura, *i.e.*, on 161 tons	—	17	64	—
Bone dust (actual returns)	106	8	15	—
Chillies and sundries, half total ...	478	12½	15	—
Cocoanuts, 1·6 per head	73	12½	15	—
Ironware, actual returns	86	8	15	—
Liquor, actual returns	128	25	15	—
Cloth, actual returns	89	25	15	—
Arrack, half total	28	17	15	—
Coir rope, actual returns	18	12½	15	—
Plateware, &c., actual returns ...	39	25	15	—
Glassware, &c., actual returns ...	8	25	15	—
Chunam, actual returns	9	8	15	—
Oilmanstores, actual returns	75	25	15	—
Kerosine oil, half total	97	25	15	—
Add freight on half of this, *i.e.*, 48 tons from Colombo to Ratnapura	—	25	64	—
Tobacco, actual returns	109	17	15	—
Cocoanut oil, half total	50	12½	15	—
Poonac, actual returns	96	12½	15	—
Sugar, half total	84	17	15	—
Cement, actual returns	25	8	15	—
Estate manure	286	8	15	—
Estate sundries	315	12½	15	—
Total	7,581			32,732 65

Down, Pelmadulla (Additional).

Estate.	Tons.	Rates. Cents.	Miles.	Value. Rs. c.
Tea, gross (1,891+378)	2,269	12½	15	4,265 72
Cardamoms	22	17	15	56 10
Plumbago	160	8	15	192 0
Mica	4	12½	15	7 50
Native.				
Arecanuts	167	12½	79	1,649 96
Plumbago	800	8	79	5,056 0
Timber	100	12½	79	988 0
Total	3,522			12,215 28
Total Up and Down ...	11,103			44,947 93

"*Coaching*" *Figures.*—For "coaching" figures on this section, *i.e.*, for passengers and parcels, we think the same figure may be taken as below Ratnapura. The two stations tap what is nearly the whole of the planting districts, and we have elsewhere noted the traffic in garden produce from above Pelmadulla as far as the Ratnapura bazaar. We therefore allow Rs. 4,000 per mile under this head, *i.e.*, 15 by 4,000 = Rs. 60,000.

Total Additional Revenue.—The following statements show what we think should be the additional revenue on the construction of this extra 15 miles, and we here note the important consideration that this extension would be the surest means of defeating the river competition.

The statement below gives the total figures :—

Additional Traffic.

Up.	Tons.	Value. Rs. c.
Malwala station ...	1,067	1,168 60
Pelmadulla station	7,581	32,732 65
Total Up Traffic ...	8,648	33,901 25
Down.		
Malwala station	568	211 47
Pelmadulla station	3,522	12,215 28
Total Down Traffic ...	4,090	12,426 75
Total Up and Down ...	12,738	46,328 0
Coaching, 15 miles at Rs. 4,000 per mile ...	—	60,000 0
Total Additional Revenue* for Pelmadulla section ...		106,328 0

G. S. SAXTON,
Government Agent, Province of Sabaragamuwa, Chairman.

C. S. VAUGHAN,
Assistant Government Agent, Kegalla.

G. WILSON GREENSHIELDS.

JOHN HILL.

* Figures for expenditure not available.

ANNEXURE A.

MINUTES of Meeting of the Ratnapura Railway Committee held at the Kachcheri, Ratnapura, on the 27th June, 1903.

Present:—Mr. Saxton, Mr. Hill, and Mr. Greenshields. *Absent:*—Mr. Vaughan.

Appointment of Committee.—Read letter No. 05307 of 23rd April, 1903, from the Hon. the Colonial Secretary, appointing Messrs. Saxton, Vaughan, Hill, and Greenshields a Committee to collect statistics and to report on the amount of the traffic which would be secured by the proposed extension of the Kelani Valley Railway to Ratnapura, and also on the profits likely to result therefrom.

Extension to Pelmadulla.—Read letter No. 05307 of 8th May, from the Hon. the Colonial Secretary, informing the Committee that His Excellency the Governor desires them to consider and report also on the extra traffic that would be likely to be brought to the Ratnapura Railway if it were extended to Pelmadulla.

Question of Extension competing with the Main Line.—Read letter No. 08667 of 22nd May, from the Hon. the Colonial Secretary, requesting the Committee to report on the possibility of the proposed extension diverting to itself traffic now going to the existing Main Line, and what precautions should be taken to prevent the extension competing with the Main Line.

Read letter No. 166/07246 of 29th April, from the Hon. the Colonial Secretary to the Government Agent, Province of Sabaragamuwa, with Government Agent's reply No. 276 of 19th May, and letter No. 655 of 17th June from the General Manager, Ceylon Government Railway, to Government, on the same subject.

The Committee were inclined to agree with the conclusion arrived at by the two last-mentioned officers, but it was thought advisable that Mr. Hill should make an independent inquiry, and he promised to report on the subject to the Committee.

Question of taking Tallies.—The Committee discussed the necessity of taking traffic tallies on the road and the river.

It was resolved that tallies were unadvisable, for the reason that the varying conditions of the river at different seasons of the year would make it necessary to take the tally for twelve months in order to ensure accuracy.

Estate Statistics.—Forms of inquiry had already been sent out to all estates interested.

It was resolved that when these had all been received and tabulated, they should be sent to the Secretaries of the various Planters' Associations, with a request that the figures might be checked.

Witnesses.—The Committee agreed that it would be desirable to ask the following gentlemen, amongst others, to give evidence: Messrs. Roberts, Maddock, Cooray, Clark, Mahawalatenna, and Jayatillake.

Tolls.—A statement of the sums realized by sale of tolls for the six years 1898–1903 was laid on the table, showing an average of Rs. 14,400.

It was resolved that it would be probably impossible to put any tolls on the river, but that it would be possible to add tolls on the road between Colombo and the Terminus.

Correspondence.—Read letter No. 452 of 18th May, from the Government Agent to the General Manager, Ceylon Government Railway, on the subject of forms of statistics, rates, estimates of passenger traffic, and pilgrims' tickets, and reply of the General Manager 1,711 of 5/6 June.

Number of Pilgrims.—Resolved to inquire from Mr. A. E. Stiven as to the number of pilgrims visiting the Peak, and as to his method of arriving at the number. The Chairman also promised to examine witnesses on this point.

Maps.—Resolved that the Surveyor-General be asked to supply the Committee with a map of the country between Ratnapura and a point 5 miles east of Pelmadulla on the scale of 2 miles to the inch. The Committee would also like a map on a smaller scale showing the Main Lines, and the Kalu-ganga and the country interested in the extension, *i.e.*, west of Haputale.

Estates at present using the Railway from Avisawella.—The Committee understand that the General Manager, Ceylon Government Railway, has recently been making inquiries as to the estates which now use the railway from Avisawella.

Resolved that the General Manager be asked for the result of such inquiry, as the produce from those estates must not be included as new traffic, either up or down, between Avisawella and Colombo.

Estimate of Cost.—Read letter No. 323 of 17th June, from the Chairman to the Hon. the Colonial Secretary, forwarding estimate of Rs. 770 for expenses of the Committee.

Balangoda, July 22, 1903.

Present:—Mr. G. S. Saxton and Mr. J. Hill. Mr. P. D. G. Clark and Mr. Mahawalatenna attended by request.

Mr. P. D. G. Clark states:—

In my opinion the district east of Agar's Land is well suited for tea, and I do not think of any danger of tea going out. Cardamoms would grow well too, but at present prices the cultivation would not be profitable. We have 37,000 rubber on Rassagalla. I do not think cocoanuts would pay. I am not aware of new land going into tea.

West of Agar's Land, the Bambarabotuwa district, is too wet for tea, generally speaking. On Hopewell we get 210 to 220 inches of rain. Roughly, the acreage there is 3,500 or 3,700. We are not extending that just now. We have not yet manured, and a good deal depends how that soil will respond to manure. It now gives about 400 lb. per acre. Our best land gives 800 lb. We do not expect to manure for, say, three years. The tea is excellent. Labour is a difficult question. This district is suited for rubber. Towards Pelmadulla I think the country also well suited. At Hunuwala, near the 72nd milepost, there is 700 acres going in within the next three years. Rubber requires one cooly to 4 acres. The district between Madampe, Lellopitiya, and Madola is, in my opinion, a splendid district for tropical produce, *i.e.*, rubber, tea. I would not plant cacao; it is too wet, and higher up it is too windy, say above Madola.

The lower parts of the district would be suited to gambier, which I am going to try. Very promising, in my opinion. Cinnamon and citronella would also do well.

Of the 3,500 acres, 1,300 acres would use a station near Lellopitiya,* if the line was extended and if a road were made to Lellopitiya. I think it would pay to make that road.

For tea cultivation I calculate 1¾ cooly per acre. Rice, roughly, 1½ bushel per cooly per month. Rice and sundries together.

We use the river for our produce now, up and down: for our Bambarabotuwa estates, 80 per cent. of our tea goes down by river. That is practically left to our contractors in Ratnapura, Mustapha Lebbe and Tepanis Appu. It is optional to them whether they send by river or road. In the dry weather they cannot get it down, or in flood. We have had considerable delays and difficulties in our river transport. Whether I and other planters would use the railway in preference to the river would depend on the rates for freight. If no higher than the present Kelani Valley Railway rates we would use the railway. From the Balangoda group of estates we get our tea to Colombo for 1 cent a pound. From the Bambarabotuwa estates, ½ cent from Ratnapura. From Hopewell factory to Ratnapura ·60 cent. By river or by road from Ratnapura to Colombo our tea costs ½ cent a pound *nett*.

Rice to Ratnapura comes now by boat. We pay 25 cents a bushel, or 62½ cents a bag. If the Government charges for rice up and produce down were not more than, say, ten per cent. higher than we pay now, the planters would, I think, undoubtedly use the railway. We limit our cart contract time to ten days between Balangoda and Colombo. It is ten days by river between Ratnapura and Colombo, that is, for down traffic. It is the up traffic which will attract us to the railway, owing to river difficulties.

In my opinion, in order to break the river competition, the railway should come to Pelmadulla. Tiruwanaketiya† is an important bazaar. If the railway is carried beyond Ratnapura there should be a station near Tiruwanaketiya and a connecting road.

There is a very steep short cut through Meeriacotta Gap into Alton estate in Maskeliya. We sometimes get tea lead, factory sundries, that way, when urgently required. We then use Hatton station, *i.e.*, we purchase from the Hatton stores, Brown & Co., or Walker & Greig. But the amount we get that way would not be more than 1½ or 2 tons a year.

I pay Re. 1 a bushel for rice from Colombo to Balangoda. It might be got perhaps for a little less: Rs. 30 a ton up to Balangoda from Colombo, say Rs. 45 a cart, is about the usual rate.

Downwards the rate from Balangoda to Colombo is about Rs. 27 a cart for tea.

Mr. Mahawalatenna says: I think cart hire, Colombo to Balangoda, is Rs. 50 up and Rs. 18 down.

Resolved to write to the Ratemahatmayas, noting their figures for Coast rice consumed by the people for the last few years according to the Administration Reports, and asking how they arrive at these figures. Also asking them whether they have noticed any additional trade after the Kelani Valley Railway was opened, and for details.

G. S.

Rakwana, July 28, 1903.

Present:—Mr. G. S. Saxton, Mr. Greenshields, by invitation Mr. Roberts and Mr. Maddock, and Mr. Elapata, Ratemahatmaya.

Rakwana District.—Mr. Roberts and Mr. Maddock show figures showing estimate for 1901, 1,514,000 lb. made tea. Acreage 4,341. Average per acre, 348 lb. For 1903 1,375,122 lb. tea for 3,260 acres, per acre 425 lb.

Some of our land has been abandoned: 1,081 acres in the last two years. These figures for 1901, though estimates, correspond very nearly to the actual amount produced. We are manuring now. It is an old district, and the unremunerative land has already been abandoned. The land at present under cultivation is, in our opinion, capable of being kept in cultivation for many years to come, especially with extra facilities for transport. It will mean manuring. In our opinion it is not a district that is likely to go out. Our prices hold their own. A good proportion of this land is practically new land. For new products we think there is not much prospect.

There is good cardamom land, but prices are not at present remunerative.

The district between this and Pelmadulla would suit rubber and cacao, and it is our opinion that a railway would be a great incentive to opening up that country.

Our advances for labour are less, we think, than in other districts, and our labour difficulties are almost nil. With a railway we should have a better chance of making use of the tin ticket system, which very few estates here now use, owing to the distance of the railway.

For tea cultivation we consider a cooly or less is enough per acre, but for opening new land more are required.

Rice and sundries 1½ bushel per cooly.

We transport our produce (down) by contracts with our Chetty at 1 cent a pound nett from every part of the district. We much prefer him taking it by road, and we are inclined to fine our contractors if they use the river, the reason of that being liability to damage by water, theft, or delay, and damage by unnecessary transfers. We could not say how much of this 1 cent a pound can be put down to the portion below Ratnapura. We should say two-thirds below Ratnapura and one-third above.

For rice up we pay Re. 1 a bushel up to, say, 88 miles, and Re. 1·12 on to Lauderdale, 96th milepost. That rice comes partly by river. We do not know what proportion comes by river and cart. The river route has caused instances of delay. We sometimes have to wait twenty or thirty days for goods up. We do not calculate on less than a month.

We would certainly use the railway from Ratnapura if the rates charged came to the same, or even a little more than we pay now.

Our cart rates are now, we think, very low. Our contractors complain of the low rates. We do not think they could reduce their rates at all, in order to compete with the railway.

We pay Rs. 30 a ton for carts up. The same rate down, except for tea, which is a special rate. A special cart would cost at least Rs. 50 from Colombo.

---

* At 62nd milepost.

† At 58th–59th milepost.

Morawak Korale.—We asked the Morawak korale superintendents whether they would use the railway if made to Pelmadulla. They all replied that if the present bridle road were converted into a cart road and the railway came to Pelmadulla they would all use it to the extent of 3,564 acres; and the produce was 1,370,000 lb. of tea, with of course up goods to correspond. We hand in the statement. They have new land coming into bearing, so the produce by the time the railway is made would be 1,500,000 lb.

There is a good deal of plumbago in the district. Rates down by cart Rs. 18 a ton, Rs. 20 from above the pass.

G. S.

Ratnapura, August 29, 1903.

Present:—All members.

Read minutes of meetings at Balangoda and Rakwana.

Pilgrims.—Read letter dated 13th July from Mr. Stiven as to the number of pilgrims going up to the Peak from the west side. The Chairman stated that he had consulted Mr. Sandison and H. Sumangala Unnanse, High Priest of Adam's Peak, but neither of them would venture to express an opinion. It was considered that 20,000 would be a very safe estimate.

Map.—The maps received from the Surveyor-General were laid on the table.

Estates now using Railway.—Read letter No. 7 of 7th July to the General Manager, Ceylon Government Railway, and his reply No. 2,322 of 28th July as to the number of estates now using the railway. It was noted that practically Hemingford Group was the only estate using the Avisawella line on this side of the country.

Haputale Estates.—As to the question of estates near Haputale using the Ratnapura or Pelmadulla Extension, letter from Mr. Hill of 29th July, in reply to the Committee's request that he would make an independent inquiry, was read.

Resolved that there seems to be no fear that the traffic would be diverted as suggested.

Morawak Korale.—The Committee considered the papers handed in by Mr. Roberts as to the use by the Morawak korale district of the railway. The Committee think that this point does not yet come up for practical consideration; the conditions necessary are the extension to Pelmadulla, and the construction of 11 miles of road between Hayes and Lauderdale. The use by the Morawak korale district of the Ratnapura Line would involve loss of traffic on the Sea Coast Line.

Alternative Trace through Panawal.—As to the alternative trace near the Glassel group of estates, read correspondence with the Assistant Government Agent, Kegalla, Mr. Hyatt, and the Chief Resident Engineer.

Resolved that in view of the Chief Resident Engineer's Report, No. 226 of 20th August, the adoption of this trace seemed to be impracticable.

Estate Returns.—The returns from estates were considered with letters from the Planters' Associations, and the figures were adopted as amended by the associations.

Boutique Returns.—The returns from the boutiques were also considered, and it was resolved that the Government Agent, Mr. Hill, and Mr. Greenshields should make an effort to have the returns further examined and checked.

Rice imported for Local (not Estate) Use.—The Chairman laid before the Committee a memorandum as to the use by the Sinhalese population of imported rice, showing that there must be a considerable quantity imported. Considering that the revenue from this source alone would be about Rs. 10 a ton, the Committee noted that it was very desirable to try and arrive at an accurate estimate of the quantity.

Return of arrack for 1902 laid on the table.

September 1, 1903.

G. S. S.,
Chairman.

Memorandum.

Administration Report, 1900.

More than half is imported. Rice, imported, Rs. 3·50 to Rs. 7·50 a bushel. Estate coolies, low-country traders, and Moormen use imported rice.

1901.

Kuruwiti Korale.—Three-fifths Coast rice.

Atakalan Korale.—People grow their own paddy and kurakkan in sufficient quantity for consumption. Imported rice by estate coolies, traders, and plumbago pit people.

Nawadun Korale.—One-third imported. Low-country traders and villagers near town use it.

Kukulu Korale.—Chief food is imported rice. Native rice one-fourth. Limited paddy cultivation.

Meda Korale.—Some 550 bushels of paddy taken to Giruwa pattu.

1902.

Kuruwiti Korale.—Three-fifths imported.

Nawadun Korale.—Locally raised one-tenth only

Kukulu Korale.—Three-fourths imported.

Meda Korale.—Half imported.

Blue Books.

	Paddy. Bushels.	Other Grains. Bushels.	Total. Bushels.
1900 ...	726,839	166,584	
1901 ...	621,610	156,750	
1902 ...	680,400	138,750	
Total ...	2,028,849	462,084	
Average ...	676,000	153,000	829,000
Converted to rice ...	338,000	153,000*	491,000

	Men.	Women.	Persons.
Population by Census, 1901 ...	73,603	59,361	132,964
Deduct estates ...	9,350	7,292	16,642
Balance ...	64,253	52,069	116,322

* Not reduced though the figures include a good deal of el-wi, which reduces by 50 per cent. when pounded.

Of whole Ceylon population, 3,565,954, there are 638,776 from ages 0–5, who, we may suppose, do not eat much rice. This is 18 per cent. So, deducting say 20 per cent., we get—

Men ...	51,403
Women ...	41,655
Total ...	93,058

Allowing 12 bushels to a man a year and 9 bushels to a woman, these people would require 616,836 + 374,895 = 991,731 bushels per annum.

The average crop, as above, is 491,000 bushels. There is, therefore, a deficiency of 500,731 bushels = 14,306 tons at 35 bushels to the ton, required by the non-estate population.

The people consume a large quantity of jak, breadfruit, and vegetables, sweet potatoes, &c., for which allowance must be made when considering this deficiency.

August 27, 1903. G. S.

October 3, 1903.

Present:—All members except Mr. Hill, who had missed the coach.

Trace through Glassel.—Read letter No. 372 of 17th September, from the Hon. the Colonial Secretary to the Government Agent, stating that the suggested trace through Glassel estate was considered undesirable on account of the expense involved in the construction of the southern portion of the trace.

Boutique Returns: Rice.—The boutique returns were considered, having been checked in accordance with the resolution of last meeting.

Read memorandum by the Chairman dated 3rd October. Considering these figures and memorandum read at the last meeting as to the proportion of the Sinhalese population using imported rice, it was resolved that the estimate for Coast rice consumed by the population other than coolies was on the safe side.

The Committee note that the cost of bringing rice by cart to Ratnapura is 50 cents a bushel; by boat the cost is 25 cents a bushel. This latter cost works out to Rs. 8·75 per ton, as compared with Rs. 10·88 for railway freight for 64 miles at 17 cents per ton per mile. The Committee would hope that the extra speed in railway, and the fact that the boats would lose all their down traffic in tea, would balance the extra cost of the rice.

Bone Dust.—The Rakwana figure was reduced to 50 tons.

Sundries.—One of the figures was reduced from 10,000 to 2,500 cwt.

Cocoanuts.—The difference in the Rakwana and Balangoda figures was explained by the statement of the former boutique-keepers that they bought from Ratnapura traders.

Plumbago.—It is admittedly difficult to get any accurate figures for plumbago. The Committee note that boats are likely to be employed for this transport, as boats are used in Colombo as store houses until the mineral is sold, whereas if it was left in railway trucks a demurrage would have to be paid.

Crockery.—One figure reduced from 425 to 80 cwt.

Chunam.—One figure of 1,110 taken as an error for 110.

Oilmanstores.—Mr. Greenshields promised to check some of the figures again.

Timber.—It was considered that the river would be preferred for down transport of timber. As to up transport of timber used for tea boxes, &c., this has been included under the head "Sundries" in the estate returns, so the figures under this head were omitted.

Other Goods.—The returns for other goods were passed as being fairly estimated.

October 8, 1903. G. S. SAXTON.

Memorandum re *Rice.*

According to the returns received, the total of rice imported is 276,532 bushels = 7,091 tons at 35 bushels to a ton.

The estate Tamil population according to the Census of 1901 is as below :—

	Males.	Females.
Kuruwiti Korale	716 ...	542
Nawadun Korale	1,821 ...	1,375
Atakalan Korale	1,300 ...	1,176
Kadawat Korale	1,827 ...	1,537
Meda Korale	1,012 ...	788
Kolonna Korale	996 ...	803
Kukulu Korale	693 ...	562
Total ...	8,365 ...	6,783
	6,783	
Total Tamil Population ...	15,148	

Hemingford estate should be added, as the estate would use the extension. Hayes and Pannilkanda in Morawak korale planting district, but both situated in the Kolonna korale, should be deducted, as they would not use the extension. Galatura, Galpottegama, and Madabaddara in Kukulu korale should also be deducted for the same reason. This would take off about 1,100 coolies, leaving 14,048 as the total. At 12 bushels per cooly per annum we should have (12 by 14,048) 168,576 bushels consumed by estate Tamil coolies. This leaves according to the boutique returns (276,532 — 168,576) 107,956 bushels to be consumed by the rest of the population, or 3,085 tons, which, in my opinion, shows that the boutique returns are not exaggerated, it being at the rate of less than one bushel per head. Compare with $3\frac{3}{4}$ bushels as given for a large proportion of the non-immigrant population in the Kelani Valley Commission Report, page 38.

G. S. SAXTON.

October 3, 1903:

From Kachcheri Cooly Returns.

	Males.	Females.
Hayes	167 ...	300
Pannilkanda	218 ...	149
Galatura	210 ...	189
Galpottegama	51 ...	35
Madabaddara	180 ...	131
	826	804
	804	
Total ...	1,630	
Hemingford, say	530	
Balance	1,130	

Jorolis Pieris says :—

I have a saw mill near Lellopitiya, near 62nd milepost, worked by a steam engine, and employing about twenty hands. I send the planks for chests for desiccated cocoanuts to Negombo. They are the same size as tea chests. We pay Rs. 80 for 1,000 such planks, *i.e.*, for a whole boatload to Negombo. We send about 10,000 in the year to Negombo. Timber planks of $\frac{1}{2}$ inch thick we send by boat; for 1,000 feet of such by carpenters' measure (*i.e.*, $\frac{1000}{24}$ cubic feet) we pay Rs. 4 to Colombo. We can send 12,000 feet of such planks in one boat. So we should get a whole boat for transport of such planks for Rs. 48 to Colombo, but that would be only in a season when boat hire was cheap. The usual price for a boat would be Rs. 60 down.

The figure 33,723 feet in our boutique returns No. 17 must be divided by 24 to make cubic feet. Carpenters do not take the thickness in their calculations; the planks are $\frac{1}{2}$ inch thick.

We have four or five boats. A very large boat would bring up 600 or 650 bushels of rice. Smaller ones 350 or 400. They are not of the same size. Such a boat would take 17 or 18 tons of plumbago. By boat we send jak and planks for tea boxes, Aridda (34), Kekuna (27), Etamba (32), Ulalu (35), Diyataliya (46), Hal (40), Katuimbula (24), Rukattana (25), Iriya (40), Malaboda (24), Walgonna, Kalamaduwa (35), Wanasapu (34). (The figures are weight per cubic foot from Mr. Lewis's book.)

We think the weight of timber we send down would be about 10 tons a boat load. Freights up are Rs. 30 for 100 bushels of rice. That is the present freight as the river is high. A fair average is Rs. 25 for 100 bushels. For coming up from Colombo the lowest freight for a boat would be Rs. 120.

G. Hendrick Fonseka says :—

I keep the store at the landing place. I have been there a year only. I do not keep a book of the number of boats which come up. Padda boats are not of the same size. The biggest boat would take about 600 bushels of rice, not more. There are boats taking 350 to 400. There are none between 400 and 600, but boats bring up less quantities. The average of boats coming up here is twenty-five a month. It would be a quick trip for a boat to leave Colombo on the 1st of a month, and get back in the same month. I think a boat would not do more than eight or nine trips in a year. A boat down costs Rs. 60 to Rs. 80, sometimes less when there are several boats and little freight. The average would be Rs. 60. I cannot tell about the weight carried.

About eight or ten double canoes loaded come a month. They bring chatties, cocoanuts, poonac, fish, onions and sundries, oil, not rice. They bring about 1 ton of goods. They take down passengers, not goods. Native passengers pay Re. 1; in the pilgrim season 75 cents. They carry up to sixteen or twenty people.

G. S., 15-10-03.

Mr. Careem and I measured several of the large padda boats yesterday; they were all about the same as the one Mr. Vaughan and I measured, say 23 ft. by 9 ft. 9 in., or 24 ft. by 9 ft. 3 in., or 24 ft. by 9 ft. 6 in.

H. S. Pieris says :—Freight down may be taken at Rs. 5 a ton. A whole boat down, say, Rs. 80. A whole boat up Rs. 120, between Ratnapura and Colombo.

G. S., 16-10-03.

October 24, 1903.

Present:—Chairman, Mr. Vaughan, and Mr. Greenshields.

Read letter from Mr. Hill explaining his absence.

Passed minutes of meetings of 29th August and 3rd October.

Read report drafted by Chairman and telegram from Chief Resident Engineer as to cost of construction. Draft was agreed to with certain amendments.

The Committee think that the extension to Ratnapura would lead to people coming to the district who now do not do so. It would also lead to people from Kalutara District, who now doubtless walk to Ratnapura, using the railway. A considerable proportion of the immigrant population of this district comes from the west coast. The railway would also bring up a number of parcels which now come by coach and carts. It is therefore considered that additional traffic would be thrown on that part of the Kelani Valley Line between Colombo and Avisawella. The Committee think that Rs. 300 a mile would be a fair estimate to add on to the present coaching receipts between Colombo and Avisawella, and they therefore take credit on this account of Rs. 300 by 37=Rs. 11,100.

We also consider that if the coaching receipts on the Colombo-Avisawella Line show higher returns after longer working, we should be justified in increasing the figure of Rs. 4,000 a mile now adopted.

G. S., 24-10-03.

Annexures B and C (maps) not reproduced.

ANNEXURE D.—Abstract of Estate Returns as accepted by Committee.

		Balangoda District.	Rakwana District.	Ratnapura District.	Miscellaneous.	Total.
Acreage in tea		5,700	3,326	4,575	1,171	14,772
Total crop estimate for 1906	lb.	2,759,300	1,476,700	1,528,500	164,000	5,928,500*
Number of bushels of rice	bushels	74,640	26,730	32,346	3,300	137,016†
Labour force	No.	6,220	2,830	3,132	330	12,512
Manure	tons	166	182	106	110	564
Sundries	„	219	109	206	20	554
Cardamoms	„	19	3	—	—	22
Plumbago	„	—	160	—	—	160
Mica	lb.	—	10,000	—	—	10,000‡
Total Up					5,033	
Total Down					3,361	
Grand Total						8,394

* 2,646 tons nett; 3,175 tons gross. † 3,915 tons. ‡ 4 tons.

ANNEXURE E.—Abstract of Boutique Returns as accepted by Committee.

		1 Ratnapura and Tiriwanaketiya.	2 Rakwana	3 Balangoda.	4 Bazaars on the Road between Avisawella and Ratnapura.	5 Total.	6 Total in Tons.	7 Total of columns 1, 2, and 3.	8 Total of column 4.
								Tons.	Tons.
Rice	bushels	133,843	65,370	51,656	25,654	276,523	7,901*	7,151*	750
Salt	„	19,374	9,700	9,232	3,411	41,717	1,210	1,111	99
Fish of all kinds	cwt.	4,404	3,315	3,140	1,659	12,518	626	543	83
Bone dust	„	250	50	56	—	406	20	20	—
Chillies and other sundries	„	5,361	7,610	3,871	2,271	19,113	956	842	114
Cocoanut	No.	113,500	1,700	50,050	—	165,250	115	115	—
Iron and ironware	cwt.	634	1,000	730	137	2,501	125	119	6
Liquor	doz.	2,700	3,390	2,700	—	8,790	181	181	—
Cloth	cwt.	757	851	934	271	2,813	141	128	13
Arrack	gallons	14,693	—	—	—	14,693	56	44	12
Coir rope	cwt.	239	168	206	13	626	31	31	—
Plateware, crockery	„	257	370	409	92	1,128	56	52	4
Glassware	„	38	83	80	4	205	10	10	—
Chunam	bushels	1,000	110	239	—	1,349	48	48	—
Oilmanstores	cwt.	872	1,088	418	—	2,378	118	118	—
Kerosine oil	gallons	19,899	10,500	7,130	4,143	41,672	195	176	19
Tobacco	cwt.	509	962	1,218	321	3,010	150	134	16
Cocoanut oil	gallons	9,573	9,520	2,594	1,043	22,730	101	96	5
Poonac	cwt.	3,212	717	1,215	178	5,322	266	258	8
Sugar	„	1,845	610	597	268	3,320	166	153	13
Cement	„	931	419	92	—	1,442	72	72	—
Total Up	—	—	—	—	—	—	12,544*	11,402*	1,142
Arecanut	cwt.	8,709	2,120	1,220	7,766	19,815	990	603	387
Plumbago	tons	—	200	—	—	200	200	200	—
Timber	„	652	—	—	—	652	652	652	—
Hides	cwt.	71	—	—	—	71	3	3	—
Kitul fibre	„	430	—	—	—	430	21	21	—
Total Down	—	—	—	—	—	—	1,866	1,479	387
Total Up and Down	—	—	—	—	—	—	14,410	12,881	1,529

* NOTE.—In this total is included 3,915 tons of rice for estates shown in Annexure D.

ANNEXURE F.—Remarks on Estimate of Goods in Detail.

Salt.—Our estimate is 41,717 bushels, *i.e.*, at 65 lb.=1 bushel, 2,711,605 lb. We may deduct 5,000 of the population as getting their supply from Hambantota, allowing about 21 lb. per head per annum, which corresponds with the allowance made by the Kelani Valley Railway Commission (see page 40 of their report). The salt for this district is obtained by boat from Colombo, and comes from Puttalam. The cost of bringing it up is, we ascertained, the same as rice, *i.e.*, 25 cents per bushel.

Fish, dried, of all kinds.—We estimate 12,518 cwt. or 1,372,016 lb., *i.e.*, about 10 lb. per head per annum, less than 1 lb. per month for the whole population per head.

Bone Dust.—We have deducted what may be taken as included under the item of Estate Manure. We understand that this is imported in increasing quantity for use as manure on paddy fields.

Cocoanuts.—The returns will show that for the Kuruwiti korale the imports are nil, the people there growing sufficient for their own use. This is not, however, the case with most of the district. The boatmen bring these up and sell them at the landing stage to the Ratnapura traders. The letter of Meedeniya Ratemahatmaya to the Kelani Valley Railway Commission, on page 21 of their report, gives an estimated consumption of 120 nuts per annum per head. Our estimate is less than 2 nuts per head (excluding Kuruwiti korale population of nearly 30,000), which cannot be considered high. We note the difference in numbers between Rakwana and Balangoda. That was explained by the traders of the former place saying they bought from Ratnapura traders only. The nuts peeled weigh 14 cwt. to the thousand, so that the 165,250 nuts weigh about 115 tons. They come chiefly from Kalutara District, and it is perhaps doubtful whether the railway would get this traffic.

Arecanuts.—There is a large trade in this produce. The nuts are all sent to Colombo after being dried.

Plumbago.—These figures are very difficult to check. The mineral is not sent through traders. It is taken direct by cart to Colombo or by boats, the latter being used as stores until the mineral is sold. Demurrage would be charged by the railway. We estimate that the railway might carry 360 tons, *i.e.*, 200 native and 160 estate produce.

Liquor.—This works out to 105,480 bottles, less than one bottle per head per annum.

Arrack.—These figures are from Kachcheri permits actually issued, and work out to about $\frac{11}{17}$ of a bottle per head per annum. The district arrack rents for four years 1902–1905 sold for Rs. 216,700.

Coir Rope.—This is brought up by boats in bales of 500 or 250 skeins, weighing about 1 cwt. and ½ cwt. respectively.

Oilmanstores.—These are brought by carts, traders saying that it is not safe to bring small things by boat.

Kerosine Oil.—This is generally brought up by double canoes, 12 tins at a time. More cannot be brought on account of the license required. A case of two tins weighs nearly 84 lb. The estimate allows about ⅓ of a gallon, or two bottles per head per annum.

Cocoanut Oil.—One gallon weighs 9¼ lb.; with packing we have taken 1 gallon = 10 lb. The estimate allows one bottle per head per annum.

Sugar.—The estimate allows less than 3 lb. per head per annum.

Timber, Unwrought.—Ratnapura is a timber-producing district. The Kachcheri permit books show that 647 permits were issued in 1902, a very large proportion of this being for the transport down the river of rafts made up of logs, poles, bamboos, &c. Fence sticks and firewood go down in large quantities. We do not think the railway could compete with this cheap means of transport.

Timber, Wrought.—An examination of the permit books at the Kachcheri for January, February, and March shows that permits were taken out for 9,113 cubic feet of sawn timber for Colombo and places near Kalutara. These are not busy months on the river, so multiplying by four will be perhaps under the mark for the year. The weight of the timber may be calculated at 40 lb. per cubic foot. This gives 163 tons for the first three months, or 652 tons for the year. The average freight down to Colombo is about Rs. 5 a ton. But timber cannot be packed very tight. Not more than 8 or 9 tons will be packed into a large padda boat. The freight for timber may therefore be taken at about Rs. 6 per ton to Colombo. The railway at fourth class rates would charge 12½ cents × 64 = Rs. 8. It would not therefore be safe to estimate on more than 100 tons for the railway.

ANNEXURE G.—Traffic Return: Up Traffic.

		Kendangamuwa.	Parakaduwa.	Kuruwita.	Ratnapura.	Total Tonnage.	Total Value.
Mileage from Colombo		46	51	57	64	—	—
First class goods at 37 cents per mile per ton	Tons	—	—	—	—	—	—
	Value Rs.	—	—	—	—	—	—
Second class goods at 25 cents per mile per ton	Tons	13	8	17	577	615	—
	Value Rs.	149·50	102·00	242·25	9,232·00	—	9,725·75
Rice for estates at 17 cents per ton per mile	Tons	66	214*	28	3,820	4,128	—
	Value Rs.	516·12	509·32	271·32	41,561·60	—	42,858·36
Rice for Sinhalese at 17 cents per mile per ton	Tons	190	86	380	1,665	2,321	—
	Value Rs.	1,485·80	745·62	3,682·20	18,115·20	—	24,028·82
Other third class goods, excluding salt and arrack, at 17 cents per mile per ton	Tons	39	17	57	558	671	—
	Value Rs.	304·98	147·39	552·33	6,071·04	—	7,075·74
Salt third class (*a*) at 17 cents per mile per ton	Tons	28	17	54	555	654	—
	Value Rs.	218·96	147·39	523·26	6,038·40	—	6,928·01
Arrack third class (*b*) at 17 cents per mile per ton	Tons	4	4	4	44	56	—
	Value Rs.	31·28	34·68	38·76	478·72	—	583·44
Machinery third class and timber at fourth and fifth and sixth class rates at 12½ cents per mile per ton	Tons	—	—	—	—	—	—
	Value Rs.	—	—	—	—	—	—
Other fourth class goods at 12½ cents per mile per ton	Tons	32	27	66	1,227	1,352	—
	Value Rs.	184·00	172·26	470·58	9,816·00	—	10,642·84

* To Hemingford 14 miles from Avisawella.

		Kendangamuwa.	Parakaduwa.	Kuruwita.	Ratnapura.	Total Tonnage.	Total Value.
Fifth class goods, excluding timber, at 10 cents per mile per ton	Tons	—	—	—	—	—	—
	Value Rs.	—	—	—	—	—	—
Tea lead and packing requisites at 8 cents per mile per ton	Tons	20	60*	—	534	614	—
	Value Rs.	73·60	67·30	—	2,734·08	—	2,874·88
Manure at 8 cents per mile per ton	Tons	10	100*	100	474	684	—
	Value Rs.	36·80	112·00	456·00	2,426·88	—	3,031·68
Other sixth class goods at 8 cents per mile per ton	Tons	4	—	2	239	245	—
	Value Rs.	14·72	—	9·12	1,223·68	—	1,247·52
Total Up goods traffic	Tons	406	533	708	9,693	11,340	—
	Value Rs.	3,015·76	2,037·86	6,245·82	97,697·60	—	108,997·04

* To Hemingford 14 miles from Avisawella.

ANNEXURE H.—Traffic Return : Down Traffic.

		Kendangamuwa.	Parakaduwa.	Kuruwita.	Ratnapura.	Total Tonnage.	Total Value.
Mileage from Colombo		46	51	57	64	—	—
First class goods at 37 cents per mile per ton	Tons	—	—	—	—	—	—
	Value Rs.	—	—	—	—	—	—
Second class goods at 25 cents per mile per ton	Tons	—	—	—	—	—	—
	Value Rs.	—	—	—	—	—	—
Third class goods at 17 cents per mile per ton	Tons	—	—	10	25	35	—
	Value Rs.	—	—	96·90	272·00	—	368·90
Tea at 12½ cents per mile per ton	Tons	57	11 251*	19	3,088	3,426	—
	Value Rs.	327·52	70·18 439·25	135·28	24,704·00	—	25,676·23
Cocoanut products at 12½ cents per mile per ton	Tons	—	—	—	—	—	—
	Value Rs.	—	—	—	—	—	—
Arecanuts at 12½ cents per mile per ton	Tons	152	46	189	—	387	—
	Value Rs.	874·00	293·48	1,347·57	—	—	2,515·05
Other fourth class goods at 12½ cents per mile per ton	Tons	—	—	—	104	104	—
	Value Rs.	—	—	—	832·00	—	832·00
Other fifth class goods at 10 cents per mile per ton	Tons	—	—	—	—	—	—
	Value Rs.	—	—	—	—	—	—
Plumbago and other sixth class goods at 8 cents per mile per ton	Tons	—	—	—	360	360	—
	Value Rs.	—	—	—	1,843·20	—	1,843·20
Total Down goods traffic	Tons	209	308	218	3,577	4,312	—
	Value Rs.	1,201·52	802·91	1,579·75	27,651·20	—	31,235·38
Grand Total	Tons	615	841	926	13,270	15,652	—
	Value Rs.	4,217·28	2,840·77	7,825·57	125,348·80	—	140,232·42

* 251 from Hemingford, 14 miles to Avisawella.

ANNEXURE I.—Statement showing the Distribution of Up Traffic between Railway and Boats for Ratnapura Station only.

	Total Traffic at Ratnapura only.	For Railway.	For Boats.
First class goods at 37 cents per mile per ton	—	—	—
Second class goods at 25 cents per mile per ton	665	577	88*
Rice for estates at 17 cents per ton per mile	3,820	3,820	—
Rice for Sinhalese at 17 cents per mile per ton	3,331	3,316	1,666†
Other third class goods, excluding salt and arrack, at 17 cents per mile per ton	830	558	272‡
Salt third class (*a*) at 17 cents per mile per ton	1,111	555	556§
Arrack third class (*b*) at 17 cents per mile per ton	44	44	—
Machinery third class and timber at fourth and fifth and sixth class rates at 12½ cents per mile per ton	—	—	—
Other fourth class goods at 12½ cents per mile per ton	1,342	1,227	115‖
Fifth class goods, excluding timber, at 10 cents per mile per ton	—	—	—
Tea lead and packing requisites at 8 cents per mile per ton	534	534	—
Manure at 8 cents per mile per ton	474	474	—
Other sixth class goods at 8 cents per mile per ton	239	239	—
Total	12,390	9,693	2,697

* Half the kerosine oil.
† Half the rice for non-estate population.
‡ Half the dried fish.
§ Half the salt.
‖ All the cocoanuts.

ANNEXURE J.—Statement showing the distribution of Down Traffic between Railway and Boats for Ratnapura Station only.

	Total Traffic at Ratnapura only.	For Railway.	For Boats.
First class goods at 37 cents per mile per ton ...	—	—	—
Second class goods at 25 cents per mile per ton ...	—	—	—
Third class goods at 17 cents per mile per ton ...	25	25	—
Tea at 12½ cents per mile per ton	3,088	3,088	—
Cocoanut products at 12½ cents per mile per ton ...	—	—	—
Arecanuts at 12½ cents per mile per ton	603	—	603*
Other fourth class goods at 12½ cents per mile per ton ...	677	104	552† 21‡
Other fifth class goods at 10 cents per mile per ton ...	—	—	—
Plumbago and other sixth class goods at 8 cents per mile per ton	360	360	—§
Total ...	4,753	3,577	1,176‖

* All the arecanuts.
† All the wrought timber except 100 tons.
‡ All the kitul fibre.
§ An unknown but large quantity of plumbago.
‖ The boats would also get firewood and some other kinds of unwrought timber.

ANNEXURE K.—Statement showing Total Traffic for Railway and Boats.

		Up.	Down.	Total.
Stations other than Ratnapura	Railway ...	1,647	735	2,382
Ratnapura station	Railway ...	9,693	3,577	13,270
Ratnapura	Boats ...	2,697	1,176*	3,873*
	Total ...	14,037	5,488	19,525

* Add unknown quantity of plumbago, firewood, and other unwrought timber.

Note for checking returns :—

				Tons.
Estate Return D ...	...	...	...	8,394
Boutique Return E ...	...	...	...	14,410
				22,804
Deduct estate rice entered both in D and E ...			...	3,915
				18,889
Add Hemingford traffic not entered in D—			214	
Up Return G ...	...	...	60	
			100	
Down Return A ...	...	...	251	
				625
				19,514
Error caused by fractional parts of tons in details of G and H			...	11
Total of tonnage in Return K ...				19,525

VII.—1904.

COMPLETION REPORT

OF

THE KELANI VALLEY RAILWAY.

BY J. PHILLIMORE, ESQ.

Chief Resident Engineer, Kelani Valley Railway.

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 25 cents.

1904.

KELANI VALLEY RAILWAY.

COMPLETION REPORT.

THE construction of the railway began on 22nd March, 1900; the line from Colombo to Avisawella, 37 miles, was opened for passenger traffic on 15th September, 1902, and for goods traffic on 17th September, 1902; the remaining portion of the line to Yatiyantota, 48 miles from Colombo, was opened for goods traffic on 14th September, 1903, and for passenger traffic on 28th September, 1903. The road bridge over the Kelani river at Yatiyantota was opened for cart traffic on 1st January, 1904, completing all work in connection with the Kelani Valley Railway Extension.

2. It has not been considered necessary in this report to deal in detail with the construction or cost of the railway, as an amplified report, containing the history of the undertaking and of the construction of the railway up to May, 1903, and remarks on the working of the line to the end of March, 1903, was submitted with letter No. 71 of 20th May, 1903, and full explanations were furnished in letter No. 79 of 9th June, 1903, as regards the excess of actual expenditure over the estimates.

3. The actual expenditure on the railway, including rolling stock and all equipment, has been up to 31st January, 1904, Rs. 5,433,679, and after adding the cost of estimated future charges for additional rolling stock and for interest on temporary advances obtained by the Crown Agents, and deducting credits expected for surplus stores and permanent way materials, the total nett expenditure on the Kelani Valley Railway will amount to Rs. 5,398,716.

4. The amount of the final revised estimate submitted with my letter No. 79 of 9th June, 1903, was Rs. 5,387,062, so that there is an excess over that estimate of Rs. 11,654.

5. It should, however, be noted that subsequent to the preparation of that estimate the following charges were brought forward by other Departments :—

Nature of Charge.	Amount. Rs. c.	Reference to Authority.
Salaries of tallymen employed in 1896-97 ...	1,805 79	Colonial Secretary's letter to the Chief Resident Engineer, Kelani Valley Railway, No. 54 of 1st July, 1903
Part interest for 1902 on loan of £1,400,000	26,649 50	Auditor-General's letter No. 127 of 19th October, 1903
Additional rolling stock for the Kelani Valley Railway	51,500 0	Colonial Secretary's letter to General Manager, Ceylon Government Railway, No. 969 of 2nd December, 1903
Interest on temporary advances obtained by Crown Agents pending completion of raising loan of £1,400,000	10,475 27	Auditor-General's letter No. 20 of 22nd January, 1904
Excess cost of wheel lathe for Locomotive Department, Ceylon Government Railway ...	3,186 58	Letter from Chief Resident Engineer, Kelani Valley Railway, to Colonial Secretary, No. 10 of 21st January, 1904
Total ...	93,617 14	

6. If these charges, of which I had had no intimation at the time of preparing the estimate, were not taken into account, a saving on the estimate of 1903 would be shown amounting to Rs. 81,963. This saving is due to the stock of stores and permanent way materials in hand at the time of preparing the estimate having been undervalued.

7. The amounts previously standing under the head of "General Charges" and "General Stores" have in the statement of expenditure for January, 1904, been brought under the head of "Contingencies," Schedule No. 1, and under the same head in the column "Credits Expected" in the present completion estimate an amount of Rs. 54,470 has been allowed, being the value of the surplus stores now on hand.

8. The general abstract has been prepared in two forms, the first showing the cost divided into two schedules, and giving in parallel columns the estimated amounts of each head, and the second in a simplified form showing the cost and rate per mile of each head of account.

9. Details of the actual cost of each main head are furnished where possible, and in the appendix are given statements of "debts expected" and "credits expected," and detailed estimates of all bridges of 30 feet total span and over costing more than Rs. 10,000.

10. An analysis of the cost of bridges of 100 feet total span and over founded on cylinders or wells is given on page 16.

11. It will be observed that the cost per square foot of the area covered by the length in lineal feet of clear waterway multiplied by the average depth from rail level to bottom of foundations works out as follows :—

Bridge.	Rs. c.
Kirilipane	8 5
Flood outlet	8 9
Yatiyantota	10 4
Sitawaka river...	12 7
Puwakpitiya	12 9

12. The high cost of the Puwakpitiya bridge is due to the great difficulty met with in sinking the foundations, and of the Sitawaka bridge partly to the same reason and partly to the great height of the bridge.

13. The cost of the Yatiyantota bridge (over the Kelani river) is moderate, considering the difficulty of the work, and credit is due to the Assistant Engineer who carried out the work, viz., Mr. M. Cole Bowen.

14. I have in previous reports favourably mentioned the Assistant Engineers who helped to bring the undertaking to a successful issue, viz., Mr. A. O. Edwards, Mr. J. R. Todd, Mr. T. Fraser, Mr. G. J. Waghorn, and Mr. M. Cole Bowen, and I would also bring under the favourable notice of Government the names of the following office staff who have worked well and faithfully for the whole period of construction:—Mr. W. E. Grenier, Accountant; Mr. G. A. Wille, Chief Storekeeper; Mr. J. P. Manchanayake, Head Draughtsman; Mr. S. D. Alwis, Bookkeeper; and Mr. E. W. Perera, Head Clerk.

Kelani Valley Railway,
Colombo, February 4, 1904.

J. PHILLIMORE,
Chief Resident Engineer.

COMPLETION ESTIMATES.

GENERAL ABSTRACT.

(I.)

Distinctive Letters.	Description of Work.	Actual Expenditure to January 31, 1904.	Debits expected (*vide* page 11).	Credits expected or realized since January 31, 1904 (*vide* page 11).	Probable nett Expenditure.	Estimated Amounts (S. P. XXXV. of 1903).
	Schedule No. 1.	Rs.	Rs.	Rs.	Rs.	Rs.
A	Felling Trees and clearing Land	18,589	—	—	18,589	18,800
B	Earthwork	649,907	—	—	649,907	657,000
C	Bridges	813,728	—	—	813,728	808,000
D	Culverts	364,624	—	—	364,624	364,000
E, F	Permanent Way; Switches and Crossings	322,321	—	—	322,321	325,000
G, H	Level Crossings; Metalling and Gravelling Roads	51,115	—	—	51,115	52,000
I	Stations	329,974	—	—	329,974	328,000
J	Miscellaneous Works	40,266	—	—	40,266	39,500
K	Contingencies	206,951	—	54,470	152,481	200,662
	Total of Schedule No. 1	2,797,475	—	54,470	2,743,005	2,792,962
	Schedule No. 2.					
L	Electric Telegraph	42,479	—	—	42,479	43,000
M	Land and Compensation	343,460	—	—	343,460	345,000
N	Engineering and Administration	283,609	2,000	—	285,609	285,000
O	Steel in Bridge Girders and Cast Iron in Bed Plates	209,581	—	—	209,581	209,500
Oa	Wrought and Cast Iron in Well Curbs and Cylinders	33,511	—	—	33,511	33,600
Ob	Steel in Culvert Girders	21,159	—	—	21,159	21,500
P	Permanent Way, Steel Rails	480,721	—	28,930	451,791	463,000
Q	Permanent Way, Fastenings	112,429	—	3,283	109,146	112,500
R	Switches and Crossings	30,131	—	—	30,131	34,000
S	Karri and Jarrah Sleepers	271,910	—	1,780	270,130	273,000
T	Rolling Stock	708,207	51,500	—	759,707	709,000
U	Contingencies	99,007	—	—	99,007	65,000
	Total of Schedule No. 2	2,636,204	53,500	33,993	2,655,711	2,594,100
	Total of both Schedules	5,433,679	53,500	88,463	5,398,716	5,387,062

(II.)

Heads of Account.	Subheads. Rs.	Main Heads. Rs.	Rate per Mile. Rs.
I.—Land and Compensation	343,460	343,460	7,156
II.—Earthwork:—			
(*a*) Felling trees and clearing land	18,589	—	—
(*b*) Formation of banks and cuttings	649,907	668,496	13,927
III.—Bridges and Culverts:—			
(*a*) Bridges	1,056,820	—	—
(*b*) Culverts	385,783	1,442,603	30,054
IV.—Roads and Level Crossings	51,115	51,115	1,065
V.—Ballast and Permanent Way	1,183,519	1,183,519	24,657
VI.—Stations and Buildings	370,240	370,240	7,713
VII.—Electric Telegraph	42,479	42,479	885
VIII.—Plant	—	—	—
IX.—Rolling Stock	759,707	759,707	15,827
X.—Engineering and Administration	285,609	285,609	5,950
Contingencies	251,488	251,488	5,239
Total	5,398,716	5,398,716	112,473

KELANI VALLEY RAILWAY.

I.—Land and Compensation.

Quantity. Acres.	Rate per Acre. Rs.	Amount. Rs.
471	729	343,460

Area per mile of railway, 9·81 acres.
Rate per mile of railway, Rs. 7,156.

Allocation.	Rs.
Schedule I.	Nil
Do. II.	343,460

II.—Earthwork.

(*a*) Felling Trees and Clearing Land.

Quantity. Acres.	Rate per Acre. Rs. c.	Amount. Rs.
471	39 46	18,589

(*b*) Formation of Banks and Cuttings.

Description.	Quantity. Cubic Yards.	Amount. Rs.
Rock	264,500	649,907
Earth	687,640	

Quantity per mile: rock 5,510 cubic yards; earth 14,326 cubic yards; total 19,836 cubic yards.
Rate per mile of railway, Rs. 13,927.

Allocation.	Rs.
Schedule I.	668,496
Do. II.	Nil

III.—Bridges and Culverts.

(*a*) Bridges.

Position.	Name of River.	Description.	Size of each Span.	No. of Spans.	Height of Formation.	Cost of Masonry, &c.	Cost of Girders delivered in Colombo.	Cost of Well Curbs and Cylinders.	Total Amount.
M. c.			Ft. in.		Ft.	Rs.	Rs.	Rs.	Rs.
0 17	—	Arch	14 0	1	11	3,725	—	—	3,725
0 36	—	Girder	21 9	1	9	1,317	1,091	—	2,408
0 79	—	Do.	30 0	1	13	7,256	1,984	—	9,240
3 19	—	Do.	40 0	1	13	5,472	3,149	—	8,621
3 78	Kirillapane	Do.	100 0	1	14	28,608	20,769	18,716	68,093
			60 0	1					
13 34	—	Do.	30 0	1	9	5,563	1,984	—	7,547
14 13	—	Do.	15 0	1	8	1,590	598	—	2,188
16 34	—	Do.	15 0	1	10	2,102	598	—	2,700
18 56	—	Do.	20 0	2	19	4,061	1,414	—	5,475
20 64	—	Do.	20 0	1	6	1,118	752	—	1,870
21 17	—	Do.	20 0	1	18	4,903	752	—	5,655
21 22	Bada-amuna-ela	Do.	60 0	2	18	15,346	12,729	—	28,075
21 66	—	Do.	15 0	1	12	2,898	598	—	3,496
22 5	—	Do.	15 0	1	11	3,277	598	—	3,875
22 31	—	Do.	20 0	1	12	4,873	752	—	5,625
22 43	—	Do.	15 0	1	9	2,011	598	—	2,609
22 50	—	Do.	20 0	1	13	3,849	752	—	4,601
22 65	Maha-oya	Do.	60 0	1	16	5,510	6,185	—	11,695
22 71	—	Do.	40 0	2	13	11,614	4,932	—	16,546
23 32	—	Do.	15 0	1	7	1,254	598	—	1,852
23 51	—	Do.	20 0	1	8	1,725	752	—	2,477
23 61	—	Do.	20 0	1	11	2,192	752	—	2,944
23 66	—	Do.	20 0	2	8	6,260	1,095	—	7,355
26 15	—	Do.	30 0	1	12	3,099	1,984	—	5,083
26 21	—	Do.	15 0	1	10	2,703	598	—	3,301
27 22	Wak-oya	Do.	100 0	1	26	18,458	10,314	—	28,772
28 1	—	Arch	15 0	1	15	3,123	—	—	3,123
28 6	Heen-ela	Girder	60 0	1	19	6,936	4,542	—	11,478
28 43	—	Do.	20 0	1	17	2,794	752	—	3,546
30 4	—	Do.	20 0	1	12	4,965	752	—	5,717
31 26	Beviagala-ela	Do.	40 0	1	20	6,636	2,585	—	9,221
32 23	—	Do.	20 0	1	8	2,297	752	—	3,049
33 58	Puwakpitiya-oya	Do.	100 0	2	16	47,130	20,904	1,572	69,606
34 28	—	Do.	30 0	1	19	3,948	1,879	—	5,827
35 55	Kiriwanda-ela	Do.	40 0	1	18	7,690	2,585	—	10,275
36 4	—	Do.	20 0	1	9	4,441	752	—	5,193
36 51	—	Do.	30 0	1	20	6,605	1,879	—	8,484
37 73	Sitawaka-ganga	Do.	75 0	4	57	182,108	26,924	6,288	215,320
38 16	—	Do.	20 0	1	17	2,932	752	—	3,684
38 32	Sitawaka flood outlet	Do.	100 0	1	26	29,962	10,452	3,257	43,671
38 34	—	Do.	20 0	1	14	3,513	752	—	4,265
38 55	—	Arch	15 0	1	15	5,406	—	—	5,406
39 21	—	Girder	30 0	1	19	16,755	1,931	—	18,686
39 61	—	Do.	30 0	1	18	9,480	1,931	—	11,411
40 55	—	Do.	15 0	1	25	21,074	598	—	21,672
40 69	—	Arch	15 0	1	23	6,220	—	—	6,220
40 79	—	Do.	15 0	1	19	4,767	—	—	4,767
43 30	—	Girder	20 0	1	11	3,516	752	—	4,268
43 71	Kannangama-oya	Do.	40 0	1	23	13,333	2,586	—	15,919
45 1	—	Arch	15 0	2	18	6,923	—	—	6,923

Position.	Name of River.	Description.	Size of each Span.	No. of Spans.	Height of Formation.	Cost of Masonry, &c.	Cost of Girders delivered in Colombo.	Cost of Well Curbs and Cylinders.	Total Amount.
M. C.			Ft. in.		Ft.	Rs.	Rs.	Rs.	Rs.
45 37	—	Girder	20 0	1	10	2,686	752	—	3,438
46 1	—	Arch	15 0	2	23	16,258	—	—	16,258
46 20		Do.	15 0	1	22	7,910	—	—	7,910
47 39	—	Girder	40 0	1	30	15,529	2,586	—	18,115
47 69	—	Do.	40 0	1	25	17,103	2,465	—	19,568
48 1	—	Arch.	15 0	1	25	13,762	—	—	13,762
48 25	Kelani river (Yatiyantota	Girder	100 0 30 0	3 2	37	143,772	43,390	3,678	190,840
						770,358	209,581	33,511	1,013,450
								Sundries ...	43,370
								Total	1,056,820

Rate per mile of railway, Rs. 22,017.

Allocation.	Rs.
Schedule I.	813,728
Do. II.	243,092

(*b*) Culverts.

Position.	Description.	Size of each Span.	Number of Spans.	Height of Formation.	Cost of Masonry, &c.	Cost of Steel Flooring delivered in Colombo.	*Total Amount.*
M. C.		Ft. in.		Ft.	Rs.	Rs.	Rs.
1 5	Open top	1 10	1	2	73	—	73
1 21	Girder	6 0	1	10	1,436	147	1,583
1 30	Open top	1 10	1	1	69	—	69
1 39	Do.	1 10	1	1	82	—	82
1 63	Girder	10 0	1	11	2,090	263	2,353
1 79	Do.	10 0	1	10	1,951	263	2,214
2 9	Do.	4 0	1	3	150	137	287
2 19	Do.	6 0	1	8	987	147	1,134
2 33	Do.	6 0	1	10	1,391	147	1,538
2 58	Do.	6 0	1	9	1,239	147	1,386
3 57	Do.	10 0	1	6	1,379	263	1,642
4 11	Do.	10 0	1	7	1,642	263	1,905
4 61	Do.	4 0	1	7	753	137	890
5 0	Do.	4 0	1	6	705	137	842
5 9	Open top	1 10	2	2	374	—	374
5 18	Girder	4 0	1	4	352	137	489
5 28	Do.	4 0	1	4	284	137	421
5 40	Do.	4 0	1	3	320	137	457
5 44	Open top	1 10	1	1	136	—	136
5 46	Do.	1 10	1	1	150	—	150
5 64	Girder	4 0	1	6	638	137	775
5 80	Open top	1 10	1	2	147	—	147
6 27	Girder	4 0	1	5	279	137	416
6 61	Do.	4 0	1	3	325	137	462
7 37	Do.	10 0	1	4	660	263	923
7 69	Open top	1 10	1	2	124	—	124
8 42	Open top	1 10	1	1	189	—	189
8 61	Flat top	1 9	1	6	455	—	455
8 68	Do.	2 6	1	8	458	—	458
9 7	Open top	1 10	1	1	150	—	150
9 23	Flat top	2 6	1	8	542	—	542
9 42	Do.	2 6	1	6	299	—	299
9 52	Open top	1 10	1	4	167	—	167
10 8	Do.	1 10	1	3	330	—	330
10 20	Girder	4 0	1	3	212	137	349
10 30	Arch	4 0	1	12	1,018	—	1,018
10 36	Do.	4 0	1	12	1,268	—	1,268
10 68	Do.	4 0	1	10	1,102	—	1,102
11 10	Covered culvert ...	2 6	1	7	466	—	466
11 17	Open top	1 10	1	4	324	—	324
11 22	Do.	1 10	1	3	188	—	188
11 27	Covered culvert ...	2 6	1	13	907	—	907
11 42	Arch	4 0	1	17	1,509	—	1,509
11 48	Do.	4 0	1	12	1,316	—	1,316
11 58	Open top	1 10	1	2	215	—	215
11 72	Covered culvert ...	2 6	1	15	1,038	—	1,038

Position. M.	Position. C.	Description.	Size of each Span. Ft.	Size of each Span. in.	Number of Spans.	Height of Formation. Ft.	Cost of Masonry, &c. Rs.	Cost of Steel Flooring delivered in Colombo. Rs.	Total Amount. Rs.
12	5	Girder ...	4	0	1	4	278	137	415
12	15	Open top ...	1	10	1	3	202	—	202
12	28	Covered culvert ...	2	6	1	9	608	—	608
12	33	Open top ...	1	10	1	3	183	—	183
12	40	Do. ...	1	10	1	3	182	—	182
12	46	Girder ...	4	0	1	7	416	137	553
12	51	Do. ...	4	0	1	7	630	137	767
12	56	Open top ...	1	10	1	3	186	—	186
12	68	Arch ...	4	0	1	11	978	—	978
12	75	Do. ...	4	0	1	9	843	—	843
13	5	Do. ...	4	0	1	7	738	—	738
13	17	Girder ...	10	0	1	3	337	263	600
13	31	Arch ...	6	0	1	7	2,845	—	2,845
13	61	Girder ...	4	0	1	6	764	137	901
13	65	Do. ...	4	0	1	6	798	137	935
13	73	Arch ...	4	0	2	4	1,043	—	1,043
14	7	Open top ...	1	10	1	1	129	—	129
14	26	Girder ...	4	0	1	8	752	137	889
14	37	Open top ...	1	10	1	5	312	—	312
14	50	Arch ...	10	0	1	11	1,528	—	1,528
14	57	Open top ...	1	10	3	4	368	—	368
15	14	Do. ...	1	10	1	1	95	—	95
16	70	Arch ...	10	0	1	13	2,797	—	2,797
16	79	Do. ...	4	0	2	8	375	—	375
17	29	Do. ...	6	0	1	8	1,787	—	1,787
17	45	Do. ...	10	0	1	11	3,210	—	3,210
18	11	Open top ...	1	10	1	1	124	—	124
18	29	Arch ...	10	0	1	14	4,819	—	4,819
18	42	Open top ...	1	10	3	4	347	—	347
18	64	Girder ...	10	0	1	13	3,189	263	3,452
18	78	Do. ...	4	0	1	10	1,771	137	1,908
19	0	Do. ...	10	0	1	12	2,177	263	2,440
19	30	Arch ...	10	0	1	13	3,037	—	3,037
19	54	Do. ...	6	0	3	10	3,884	—	3,884
19	65	Do. ...	4	0	1	7	1,439	—	1,439
19	70	Girder ...	4	0	1	4	779	137	916
20	8	Do. ...	4	0	1	7	645	137	782
20	19	Open top ...	1	10	1	2	376	—	376
20	30	Covered culvert ...	2	6	2	9	1,138	—	1,138
20	49	Do. ...	2	6	2	12	1,748	—	1,748
20	67	Girder ...	6	0	1	5	1,491	280	1,771
23	7	Flat top ...	2	6	2	9	630	—	630
23	17	Open top ...	1	10	1	4	215	—	215
23	46	Girder ...	6	0	1	8	1,343	100	1,443
23	74	Open top ...	1	10	1	3	200	—	200
24	22	Do. ...	1	10	1	2	136	—	136
24	34	Trough culvert ...	10	0	1	6	798	266	1,064
24	38	Do. ...	10	0	1	6	1,370	266	1,636
24	43	Do. ...	6	0	1	5	775	192	967
24	57	Open top ...	1	10	1	2	133	—	133
24	67	Girder ...	10	0	1	2	589	280	869
24	77	Open top ...	1	10	1	1	155	—	155
25	14	Do. ...	1	10	1	4	402	—	402
25	21	Trough culvert ...	10	0	1	10	1,911	266	2,177
25	33	Do. ...	6	0	1	9	1,435	192	1,627
25	35	Arch ...	4	0	1	7	711	—	711
25	40	Open top ...	1	10	1	3	140	—	140
25	65	Flat top ...	1	10	1	3	108	—	108
25	75	Open top ...	1	10	2	4	586	—	586
26	47	Arch ...	4	0	1	9	924	—	924
26	56	Girder ...	10	0	1	10	3,227	280	3,507
27	5	Arch ...	4	0	1	9	915	—	915
27	11	Open top ...	1	10	1	2	276	—	276
27	29	Arch ...	6	0	1	11	1,475	—	1,475
27	52	Do. (over water mains) ...	3	0	3	—	2,301	—	2,301
27	56	Flat top ...	2	6	1	11	844	—	844
27	64	Do. ...	2	6	1	9	830	—	830
27	70	Open top ...	1	10	1	3	349	—	349
28	13	Do. ...	1	10	2	5	706	—	706
28	20	Arch ...	10	0	1	13	1,940	—	1,940
28	33	Trough culvert ...	6	0	1	3	279	192	471
28	67	Arch ...	6	0	1	16	1,978	—	1,978
28	73	Open top ...	1	10	1	1	155	—	155
29	1	Arch ...	4	0	1	11	1,306	—	1,306
29	14	Do. ...	6	0	1	11	1,667	—	1,667
29	16	Do. ...	6	0	1	10	1,687	—	1,687
29	37	Do. ...	6	0	1	9	1,185	—	1,185
29	56	Do. ...	4	0	1	7	1,581	—	1,581
29	65	Open top ...	1	10	1	1	220	—	220
29	70	Do. ...	1	10	1	1	311	—	311

Position. M.	Position. C.	Description.	Size of each Span.	Number of Spans.	Height of Formation.	Cost of Masonry, &c.	Cost of Steel Flooring delivered in Colombo.	Total Amount.
			Ft. in.		Ft.	Rs.	Rs.	Rs.
29	75	Open top	1 10	1	1	219	—	219
30	1	Trough culvert ...	10 0	1	13	2,663	266	2,929
30	23	Open top	1 10	1	2	189	—	189
30	29	Girder	4 0	1	7	514	70	584
30	35	Open top	1 10	1	3	305	—	305
30	47	Arch	6 0	1	9	1,283	—	1,283
30	62	Open top	1 10	2	5	456	—	456
30	73	Arch	10 0	1	19	3,429	—	3,429
31	18	Open top	1 10	1	1	225	—	225
31	36	Arch	6 0	1	13	111	—	111
31	48	Girder	6 0	1	8	704	100	804
31	54	Open top	1 10	1	2	240	—	240
31	57	Flat top	1 10	1	1	191	—	191
31	63	Girder	6 0	1	9	1,537	100	1,637
31	74	Do.	6 0	1	4	1,018	100	1,118
31	78	Do.	4 0	1	4	889	70	959
32	2	Road culvert	—	—	—	182	—	182
32	14	Open top	1 10	1	1	192	—	192
32	27	Girder	6 0	1	8	1,212	100	1,312
32	73	Do.	6 0	1	4	1,147	100	1,247
33	2	Do.	4 0	1	7	1,004	70	1,074
33	10	Do.	4 0	1	3	625	70	695
33	26	Do.	10 0	1	5	1,293	280	1,573
33	31	Covered culvert ...	1 10	1	4	207	—	207
33	39	Girder	4 0	1	1	243	70	313
33	45	Road culvert	—	—	—	153	—	153
33	76	Open top	1 10	1	2	328	—	328
34	4	Girder	6 0	1	5	316	100	416
34	13	Do.	10 0	1	9	2,312	280	2,592
34	17	Do.	10 0	1	14	2,660	280	2,940
34	32	Road culvert	3 0	1	—	560	—	560
34	52	Open top	1 10	1	3	270	—	270
34	58	Do.	1 10	2	3	468	—	468
34	66	Do.	1 10	1	1	205	—	205
34	77	Do.	1 10	1	4	295	—	295
35	0	Do.	1 10	1	4	284	—	284
35	18	Girder	10 0	1	18	5,278	280	5,558
35	29	Arch	6 0	1	13	2,174	—	2,174
35	53	Girder	10 0	1	13	2,470	280	2,750
35	64	Arch	4 0	1	8	1,230	—	1,230
35	74	Open top	1 10	1	1	221	—	221
36	13	Do.	1 10	1	1	271	—	271
36	20	Girder	4 0	1	4	282	70	352
36	40	Arch	4 0	1	14	1,851	—	1,851
36	45	Do.	4 0	1	9	1,266	—	1,266
36	56	Do.	10 0	1	24	7,331	—	7,331
—		Avisawella culvert ...	—	—	—	1,044	—	1,044
37	0	Open top	1 10	1	3	266	—	266
37	3	Girder	6 0	1	3	452	100	552
37	26	Open top	1 10	1	3	315	—	315
37	29	Arch	4 0	1	11	1,048	—	1,048
37	34	Open top	1 10	1	1	182	—	182
37	36	Do.	1 10	1	4	183	—	183
37	40	Do.	1 10	1	4	287	—	287
37	49	Arch	6 0	1	16	2,168	—	2,168
37	56	Open top	1 10	1	3	207	—	207
37	59	Girder	4 0	1	5	794	70	864
37	64	Arch	6 0	1	24	2,363	—	2,363
38	16	Road culvert	—	—	—	2,271	—	2,271
38	25	Girder	10 0	1	17	2,629	280	2,909
38	65	Arch	4 0	1	12	1,800	—	1,800
38	70	Covered culvert ...	1 10	1	2	416	—	416
38	77	Girder	6 0	1	5	793	100	893
39	1	Do.	4 0	1	7	634	136	770
39	8	Do.	4 0	1	6	383	136	519
39	10	Covered culvert ...	1 10	1	—	231	—	231
39	29	Girder	6 0	1	6	498	147	645
39	37	Covered culvert ...	1 10	1	—	276	—	276
39	41	Girder	10 0	1	10	1,198	259	1,457
39	51	Do.	6 0	1	6	612	148	760
40	0	Arch	6 0	1	16	2,312	—	2,312
40	6	Do.	4 0	1	13	1,506	—	1,506
40	10	Do.	4 0	1	7	947	—	947
40	21	Do.	10 0	1	15	2,103	—	2,103
40	33	Do.	4 0	1	9	1,297	—	1,297
40	48	Do.	4 0	1	13	1,187	—	1,187
40	62	Girder	6 0	1	3	785	147	932
41	2	Arch	4 0	1	7	820	—	820
41	6	Covered culvert ...	1 10	1	4	343	—	443

Position.		Description.	Size of each Span.	Number of Spans.	Height of Formation.	Cost of Masonry, &c.	Cost of Steel Flooring delivered in Colombo.	Total Amount.
M.	C.		Ft. in.		Ft.	Rs.	Rs.	Rs.
41	12	Arch	10 0	2	19	4,921	—	4,921
41	27	Covered culvert ...	1 10	1	2	348	—	348
41	32	Girder	6 0	1	9	498	147	645
41	36	Do.	4 0	1	2	301	136	437
41	37	Covered culvert ...	1 10	1	3	399	—	399
41	38	Girder	4 0	1	5	515	136	651
41	43	Do.	4 0	1	6	687	136	823
41	57	Arch	6 0	1	11	1,402	—	1,402
41	64	Do.	10 0	1	21	3,963	—	3,963
41	75	Covered culvert ...	1 10	1	5	277	—	277
42	0	Girder	4 0	1	8	1,120	136	1,256
42	4	Covered culvert ...	1 10	1	1	343	—	343
42	6	Do.	1 10	1	1	236	—	236
42	15	Arch	10 0	1	23	3,487	—	3,487
42	22	Covered culvert ...	1 10	1	—	292	—	292
42	32	Do.	1 10	1	1	247	—	247
42	35	Arch	4 0	1	11	1,403	—	1,403
42	38	Do.	4 0	1	11	1,220	—	1,220
42	44	Do.	4 0	1	8	1,163	—	1,163
42	47	Girder	4 0	1	4	251	136	387
42	54	Do.	4 0	1	2	240	136	376
42	62	Covered culvert ...	1 10	1	—	212	—	212
42	65	Girder	4 0	1	—	201	136	337
42	68	Do.	6 0	1	—	264	147	411
42	69	Do.	6 0	1	—	238	147	385
43	6	Do.	4 0	1	7	523	136	659
43	9	Do.	4 0	1	3	238	136	374
43	12	Do.	4 0	1	3	246	136	382
43	18	Do.	4 0	1	5	247	136	383
43	20	Do.	4 0	1	4	316	136	452
43	36	Do.	6 0	1	12	1,919	147	2,066
43	41	Do.	4 0	1	2	310	136	446
43	44	Covered	1 10	1	2	226	—	226
43	46	Arch	4 0	1	10	992	—	992
43	55	Girder	4 0	1	6	445	136	581
43	62	Arch	6 0	1	8	1,081	—	1,081
44	0	Do.	6 0	1	11	1,192	—	1,192
44	6	Girder	4 0	1	4	376	136	512
44	8	Do.	4 0	1	5	522	136	658
44	12	Arch	6 0	1	8	1,026	—	1,026
44	15	Covered culvert ...	1 10	1	3	162	—	162
44	17	Do.	1 10	1	3	216	—	216
44	26	Girder	10 0	1	10	1,514	260	1,774
44	36	Do.	10 0	1	18	4,000	260	4,260
44	37	Do.	10 0	1	16	3,863	260	4,123
44	41	Arch	10 0	1	10	1,680	260	1,940
44	44	Girder	4 0	1	9	735	136	871
44	45	Arch	4 0	1	10	1,189	—	1,189
44	54	Girder	4 0	1	3	533	136	669
44	60	Do.	4 0	1	2	476	136	612
44	65	Arch	6 0	1	10	1,984	—	1,984
44	73	Do.	10 0	1	18	5,678	—	5,678
45	10	Do.	4 0	1	17	784	—	784
45	28	Do.	6 0	1	11	2,533	—	2,533
45	50	Girder	4 0	1	6	368	136	504
45	53	Covered culvert ...	1 10	2	—	401	—	401
—		Arch (station approach road) ...	10 0	1	12	5,453	—	5,453
45	65	Girder	6 0	1	6	991	147	1,138
45	70	Arch	10 0	1	15	4,755	—	4,755
46	6	Covered culvert ...	1 10	1	5	471	—	471
46	10	Girder	4 0	1	3	269	136	405
46	25	Covered culvert ...	1 10	1	2	293	—	293
46	33	Arch	10 0	2	18	4,584	—	4,584
46	37	Girder	10 0	2	4	1,345	519	1,864
46	38	Covered culvert ...	1 10	1	—	182	—	182
46	41	Arch	4 0	1	10	902	—	902
46	48	Covered culvert ...	1 10	1	2	287	—	287
46	52	Arch	6 0	1	13	2,461	—	2,461
46	55	Girder	10 0	3	7	1,799	770	2,569
46	62	Covered culvert ...	1 10	1	4	420	—	420
46	69	Arch	4 0	1	9	995	—	995
46	71	Girder	10 0	3	12	2,291	770	3,061
46	75	Do.	6 0	1	7	1,312	147	1,459
46	79	Covered culvert ...	1 10	1	3	401	—	401
46	80	Arch	6 0	1	8	3,198	—	3,198
47	4	Girder	4 0	1	2	263	136	399
47	5	Covered culvert ...	1 10	1	4	289	—	289
47	7	Arch	10 0	1	20	5,765	—	5,765
47	17	Covered culvert ...	1 10	1	6	765	—	765

Position. M. C.	Description.	Size of each Span. Ft. in.	Number of Spans.	Height of Formation. Ft.	Cost of Masonry, &c. Rs.	Cost of Steel Flooring delivered in Colombo. Rs.	Total Amount. Rs.
47 19	Covered culvert ...	1 10	1	6	533	—	533
47 21	Girder	10 0	1	8	2,843	260	3,103
47 26	Do. ...	6 0	1	7	866	147	1,013
47 30	Covered culvert ...	1 10	1	3	429	—	429
47 47	Arch	10 0	1	14	3,013	—	3,013
47 52	Covered culvert ...	1 10	1	3	555	—	555
47 54	Do.	1 10	1	7	522	—	522
47 58	Arch	4 0	1	11	1,262	—	1,262
47 71	Covered culvert ...	2 0	1	16	619	—	619
47 75	Arch	4 0	1	10	1,384	—	1,384
					309,203	19,198	328,401
						102 Pipes and Sundries ...	57,382
						Total	385,783

Rate per mile of railway, Rs. 8,037.

Allocation.	Rs.
Schedule I.	364,624
Do. II.	21,159

IV.—Roads and Level Crossings (inclusive of Road Diversions and Station Approach Road).

Lump sum, Rs. 51,115.

Rate per mile of railway, Rs. 1,065.

Allocation.	Rs.
Schedule I.	51,115
Do. II.	Nil.

V.—Ballast and Permanent Way.

	Total Amount. Rs.	Rate per Mile of Track laid. Rs.	Rate per Mile of Through Railway. Rs.
Steel rails	451,791	8,773	9,412
Fastenings	109,146	2,119	2,274
Switches and crossings ...	30,131	585	628
Sleepers	270,130	5,245	5,628
Laying permanent way and ballast	322,321	6,259	6,715
Total ...	1,183,519	22,981	24,657

Length laid.

	Miles.
Through Main line	48
Extra in Sidings	3½
Total Length ...	51½

Rate per mile of railway, Rs. 24,657.

Allocation.	Rs.
Schedule I.	322,321
Do. II.	861,198

Description.	Maradana (Mile 0).		Nugegoda (Mile 5⅝).		Pannipitiya (Mile 10⅝).		Padukka (Mile 21¼).		Waga (Mile 27⅝).		Kosgama (Mile 30¾).		Puwakpitiya (Mile 34¼).		Avisawella (Mile 36¾).		Dehiowita (Mile 42½).		Karawanella (Mile 46¾).		Yatiyantota (Mile 48½).		Totals for Whole Line.	
	No.	Cost.	No.	Cost.	No.	Cost.	No.	Cost.	No.	Cost.	No.	Cost.	No.	Cost.	No.	Cost.	No.	Cost.	No.	Cost.	No.	Cost.	No.	Cost.
		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.
Passenger station building ...	—	—	1	4,690	1	6,109	1	6,848	1	6,966	1	5,715	—	—	1	7,494	1	8,924	1	5,489	1	6,106	9	58,341
Residence for clerk ...	—	—	1	132	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	132
Latrines ...	—	—	1	321	1	321	1	450	1	450	1	494	1	219	1	971	1	490	1	457	1	472	10	4,645
Converting railway school into an office	—	632	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	632
Platform and platform wall (passenger)	1	7,049	1	840	1	902	1	1,026	1	902	1	1,045	—	—	1	2,820	1	1,056	1	1,573	1	2,419	10	19,632
Platform paling and wicket gate ...	1	399	1	461	1	461	1	451	1	459	1	451	—	—	1	359	1	395	1	511	1	825	10	4,772
Weighing machine, platform ...	1	215	1	225	1	225	1	225	1	228	1	225	1	225	1	225	1	225	1	225	1	225	11	2,468
Goods shed, including platform wall and outbuilding ...	1	15,430	—	—	—	—	1	4,572	1	4,031	1	5,522	1	4,925	1	11,256	1	7,188	1	7,115	1	7,014	9	67,053
Plumbago shed ...	—	5,325	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	5,325
Weighbridge and shed ...	1	3,427	—	—	—	—	—	—	—	—	—	—	—	—	1	4,564	1	3,772	1	3,799	1	3,799	5	19,361
Crane, jib, hand (3-ton) ...	1	1,730	—	—	—	—	—	—	—	—	—	—	—	—	1	1,854	—	—	—	—	1	2,010	3	5,594
Engine shed, including ash pits and drains ...	1	4,178	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	7,979	2	12,157
Carriage and repairing shed, including ash pits and drains ...	1	2,944	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	2,944
Machinery and appliances for carriage shed, lump sum ...	—	10,796	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10,796
Turntable, engine ...	1	4,063	—	—	—	—	—	—	—	—	—	—	—	—	1	3,360	—	—	—	—	1	3,936	3	11,359
Coal stage and coal crane ...	1	374	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	329	2	703
Wells ...	—	—	1	487	1	582	1	268	—	—	1	70	—	—	1	542	—	—	1	385	1	1,090	7	3,424
Pumps, force, hand power ...	—	—	1	475	—	—	1	405	—	—	—	—	—	—	1	423	—	—	—	—	1	428	4	1,731
Pipes, cast iron, 3 in. ...	3271.ft	366	1061.ft	124	—	—	1061.ft	124	1061.ft	124	—	—	—	—	1061.ft	124	—	—	—	—	1771.ft	207	9281.ft	1,069
Do. 4 in. ...	811.ft	122	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	811.ft	122
Do. 6 in. ...	—	—	3301.ft	759	—	—	3311.ft	761	3311.ft	762	—	—	—	—	3311.ft	762	—	—	—	—	—	—	1,323 l.ft	3,044
Tanks, water, 1,500 gallons ...	2	3,449	1	1,186	—	—	1	1,505	1	1,604	—	—	—	—	1	1,053	—	—	—	—	1	1,297	7	10,094
Water column, 6 in. ...	—	—	1	961	—	—	1	715	1	1,087	—	—	—	—	1	1,245	—	—	—	—	1	255	5	4,263
Hydrants with hose ...	2	533	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	347	3	880
Staff quarters, buildings ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	18,284	5	18,284
Porters' lines, rooms ...	—	—	—	—	3	1,000	3	1,000	3	1,053	3	1,117	3	1,030	6	1,889	6	2,000	6	1,938	6	2,346	39	13,373
Firemen's lines, rooms ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	2,346	6	2,346
Lamp posts ...	—	—	4	82	4	82	4	82	4	82	4	82	—	—	4	82	4	82	4	82	4	82	36	738
Total ...	—	61,032	—	10,743	—	9,682	—	18,432	—	17,748	—	1,4721	—	6,399	—	39,023	—	24,132	—	21,574	—	61,796	—	285,282

Rate per mile of railway, Rs. 7,713.

Allocation.	Rs.
Schedule I. ...	370,240
Do. II. ...	Nil.

Allowance for furniture, &c. ...	21,494
Proportion of extension of carriage shed, C. G. R. ...	19,882
Sundries ...	3,316
	329,974
Miscellaneous Works (Lines and Residences for Ways and Works Department)	40,266
Total ...	370,240

VII.—Electric Telegraph.

Lump sum, Rs. 42,479.

Rate per mile of railway, Rs. 885.

Allocation.	Rs.
Schedule I.	Nil.
Do. II.	42,479

VIII.—Plant.

This item has not been kept separate, but has been charged to the main heads concerned.

IX.—Rolling Stock.

Description.	Number.	Actual Cost delivered at Maradana.		Actual Cost of Erection.	Total Actual Cost.
		Rs	Rs.	Rs.	Rs.
Locomotives	7	—	183,958	7,157	191,115
1st and 2nd class bogie carriages ...	5	82,043			
Composite 3rd class carriages and brakes ...	5	48,993	227,424	4,878	232,302
Bogie 3rd class carriages	10	87,070			
Under frames,..	2	9,318			
Covered goods bogie wagons	40	—	181,840	4,675	186,515
High-sided bogie wagons	5	19,540	50,804	2,564	53,368
Low-sided bogie wagons	8	31,264			
Bogie gunpowder van	1	—	6,500	18	6,518
Travelling oil tank	1	—	8,551	74	8,625
Travelling crane	1	—	10,034	247	10,281
Crocodile	1	—	11,449	114	11,563
Duplicate parts for engines	—	—	7,920	—	7,920
			688,480	19,727	708,207
Additional rolling stock sanctioned as per letter No. 969 from Colonial Secretary to General Manager dated December 2, 1903					51,500
				Total ...	759,707

Rate per mile of railway, Rs. 15,827.

Allocation.	Rs.
Schedule I.	Nil.
Do. II.	759,707

X.—Engineering and Administration (including Survey and Preliminary Expenses).

Lump sum, Rs. 285,609.

Rate per mile of railway, Rs. 5,950.

Allocation.	Rs.
Schedule I.	Nil.
Do. II.	285,609

Contingencies.

	Amount. Rs.
General charges	99,692
General stores...	52,789
Salaries of tallymen employed by the Government Agent, Western Province, in 1896–1897	1,806
Expenses incurred by Crown Agents in raising loan of £1,400,000 ...	43,500
Part interest for 1902 on loan of £1,400,000	26,650
Interest on temporary advances obtained by the Crown Agents pending completion of raising loan of £1,400,000	10,475
Lighting Maradana station with gas	4,052
Signals at all stations	12,524
Total ...	251,488

Rate per mile of railway, Rs. 5,239.

Allocation.	Rs.
Schedule I.	152,481
Do. II.	99,007

APPENDIX.

DEBITS EXPECTED.

	Amount. Rs.
N.—Engineering and Administration :—	
Salaries, &c., subsequent to 31st January, 1904	2,000
T.—Rolling Stock :—	
As per estimate of the General Manager of the Railway (*vide* his letter No. 957 of 9th September, 1903, to the Colonial Secretary)	51,500
Total Debits expected ...	53,500

CREDITS EXPECTED.

	Amount. Rs.	Total Amount. Rs.
K.—"Contingencies":—		
Surplus Stores :		
Tools and plant, as per detailed statement	45,825	
Office furniture, do.	1,872	
Surveying and drawing instruments, as per detailed statement ...	6,343	
Stationery and drawing materials do.	430	
		54,470
Permanent Way Materials :—		
Steel rails, as per detailed statement	28,930	
Fastenings do.	3,283	
Sleepers do.	1,780	
		33,993
Total Credits expected		88,463

DETAILED ESTIMATES.

Kirilipane Bridge.

One Span of 100 Feet and one Span of 60 Feet at 3 Miles 78 Chains.

Description.	Quantity.		Rate. Rs. c.	Per	Amount. Rs.
Cast iron cylinders delivered in Colombo ...	116	tons	... 140 0 ...	ton ...	16,240
Transport of cylinders to site		do.	... 9 50 ...	do. ...	1,102
Sinking cylinders ...	207	lineal feet	... 40 0 ...	lineal foot ...	8,280
Hearting for cylinders ...	296	cubic yards	... 16 0 ...	cubic yard ...	4,736
Masonry in superstructure ...	125	do.	... 21 0 ...	do. ...	2,625
Cement bed blocks ...	137	cubic feet	... 2 50 ...	cubic foot ...	343
Girders delivered in Colombo	80½	tons	... 258 0 ...	ton ...	20,769
Transport of girders to site ...	80½	do.	... 15 0 ...	do. ...	1,207
Erection and painting of girders	80½	do.	... 89 50 ...	do. ...	7,205
Teak timber ...	180	cubic feet	... 4 50 ...	cubic foot ...	810
Pitching		—	... — ...	— ...	200
Service works ...		—	... — ...	— ...	2,100
				Total ...	65,617
Cost and transport of cylinders from Galle deposited at bridge site, not suitable for this work (not included in above)					2,476
				Nett Total ...	68,093

Bada-amuna-ela Bridge.

Two Spans of 60 Feet at 21 Miles 22 Chains.

Description.	Quantity.		Rate. Rs. c.	Per	Amount. Rs.
Excavating foundation ...	429	cubic yards	... 1 45 ...	cubic yard ...	622
Concrete in foundation ...	184	do.	... 17 55 ...	do. ...	3,229
Masonry in superstructure	380	do.	... 17 7 ...	do. ...	6,487
Ashlar	6¾	do.	... 25 0 ...	do. ...	169
Girders delivered in Colombo	58	tons	... 219 47 ...	ton ...	12,729
Transport of girders to site ...	58	do.	... 16 0 ...	do. ...	928
Erection	58	do.	... 48 10 ...	do. ...	2,789
Teak timber... ...	150	cubic feet	... 4 50 ...	cubic foot ...	675
Service works ...		—	... — ...	— ...	447
				Total ...	28,075

Maha-oya Bridge.

One Span of 60 Feet at 22 Miles 63 Chains.

Description.	Quantity.	Rate. Rs. c.	Per	Amount. Rs.
Excavating foundation ...	143 cubic yards	1 19	cubic yard	170
Concrete in foundation ...	19 do.	17 50	do.	333
Masonry in superstructure ...	146 do.	16 5	do.	2,343
Ashlar in copes ...	5⅝ do.	25 0	do.	146
Ashlar in ballast walls ...	78 do.	0 75	do.	58
Girders delivered in Colombo	28¾ tons	215 14	ton	6,185
Transport of girders to site ...	28¾ do.	16 75	do.	482
Erection	28¾ do.	42 35	do.	1,218
Teak timber... ...	75 cubic feet	4 50	cubic foot	337
Excavation in diversion of stream	506 cubic yards	0 52	cubic yard	263
Pitching	16 do.	7 0	do.	112
Service works ...	—	—	—	48
			Total ...	11,695

Bridge at 22 Miles 71 Chains.

Two Spans of 40 Feet.

Description.	Quantity.	Rate. Rs. c.	Per	Amount. Rs.
Wooden well curbs ...	No. 3	235 0	each	705
Transport of well curbs to site setting and rivetting well curbs ...	No. 3	19 0	do.	58
Sinking wells ...	56 lineal feet	72 65	lineal foot	4,068
Brickwork in steining ...	102 cubic yards	21 60	cubic yard	2,203
Hearting for wells ...	70½ do.	14 80	do.	1,043
Brickwork in superstucture ...	7 do.	14 80	do.	104
Bed blocks	56 cubic feet	1 75	cubic foot	98
Girders delivered in Colombo	24½ tons	201 31	ton	4,932
Transport of girders to site ...	24½ do.	6 30	do.	154
Erection	24½ do.	24 7	do.	590
Teak timber ...	96 cubic feet	4 50	cubic foot	432
Pitching	33 cubic yards	7 0	cubic yard	231
Service works ...	—	—	—	1,928
			Total ...	16,546

Wak-oya Bridge.

One Span of 100 Feet at 27 Miles 22 Chains.

Description.	Quantity.	Rate. Rs. c.	Per	Amount. Rs.
Excavating foundation ...	182 cubic yards	0 87	cubic yard	158
Concrete in foundation ...	33 do.	17 50	do.	577
Masonry in superstructure ...	347 do.	16 11	do.	5,590
Ashlar	98 cubic feet	0 75	cubic foot	74
Bed blocks and coping ...	5 cubic yards	31 40	cubic yard	157
Girders delivered in Colombo	49 tons	210 50	ton	10,315
Transport of girders to site ...	49 do.	8 20	do.	402
Erection	49 do.	158 83	do.	7,783
Teak timber ...	220 cubic feet	4 50	cubic foot	990
Pitching	117 cubic yard	7 0	cubic yard	819
Service works ...	—	—	—	1,907
			Total ...	28,772

Heen-ela Bridge.

One Span of 60 Feet at 28 Miles 6 Chains.

Description.	Quantity.	Rate. Rs. c.	Per	Amount. Rs.
Excavating foundation ...	247 cubic yards	1 55	cubic yard	393
Concrete in foundation ...	63 do.	17 50	do.	1,102
Masonry in superstructure ...	242 do.	16 11	do.	3,899
Ashlar	108 cubic feet	0 75	cubic foot	81
Bed blocks and coping ...	5 cubic yards	24 8	cubic yard	120
Girders delivered in Colombo	22⅔ tons	201 87	ton	4,542
Transport of girders to site ...	22⅔ do.	5 0	do.	113
Erection	22⅔ do.	39 60	do.	891
Teak timber... ...	75 cubic feet	4 50	cubic foot	337
			Total ...	11,478

Puwakpitiya River Bridge.

Two Spans of 100 Feet at 33 Miles 58 Chains.

Description.	Quantity.	Rate. Rs. c.	Per	Amount. Rs.
Excavating foundation ...	894 cubic yards	... 2 20	... cubic yard	... 1,974
Concrete in foundation ...	96 do.	... 17 50	... do.	... 1,680
Well curbs delivered in Colombo ...	5½ tons	... 285 82	... ton	... 1,572
Transport of well curbs to site	5½ do.	... 10 0	... do.	... 55
Setting and rivetting well curbs	5½ do.	... 38 73	... do.	... 213
Sinking wells ...	318 cubic yards	... 21 26	... cubic yards	... 6,761
Masonary in steining ...	178 do.	... 40 95	... do.	... 7,289
Hearting for wells ...	149 do.	... 20 46	... do.	... 3,347
Masonry in superstructure ...	204 do.	... 17 87	... do.	... 3,647
Cement bed blocks ...	143 cubic feet	... 1 50	... cubic foot	... 214
Girders delivered in Colombo	98 tons	... 213 30	... ton	... 20,904
Transport of girders to site ...	98 do.	... 26 52	... do.	... 2,599
Erection and painting of girders	98 do.	... 67 90	... do.	... 6,653
Teak timber... ...	224 cubic feet	... 5 0	... cubic foot	... 1,120
Pitching	312 cubic yards	... 11 23	... cubic yard	... 3,505
Service works ...	—	... —	... —	... 7,075
Establishment ...	—	... —	... —	... 998
			Total	... 69,606

Kiriwande-ela Bridge.

One Span of 40 Feet at 35 Miles 55 Chains.

Description.	Quantity.	Rate. Rs. c.	Per	Amount. Rs.
Excavating foundation ...	205 cubic yards	... 2 46	... cubic yard	... 506
Concrete in foundation ...	156 do.	... 17 50	... do.	... 2,730
Masonry in superstructure ...	227 do.	... 14 72	... do.	... 3,343
Bed blocks	37½ cubic feet	... 1 50	... cubic foot	... 56
Coping	108 do.	... 0 93	... do.	... 100
Girders delivered in Colombo	12 tons	... 215 42	... ton	... 2,585
Transport of girders to site ...	12 do.	... 10 42	... do.	... 125
Erection and painting of girders	12 do.	... 50 0	... do.	... 600
Teak timber ...	46 cubic feet	... 5 0	... cubic foot	... 230
			Total	... 10,275

Sitawaka River Bridge.

Four Spans of 75 Feet at 37 Miles 73 Chains.

Description.	Quantity.	Rate. Rs. c.	Per	Amount. Rs.
Excavating foundation ...	90 cubic yards	... 54 0	... cubic yard	... 49
Concrete in foundation ...	36 do.	... 16 41	... do.	... 591
Well curbs delivered in Colombo	22 tons	... 285 83	... ton	... 6,288
Transport of well curbs to site	22 do.	... 10 0	... do.	... 220
Setting and rivetting well curbs	22 do.	... 57 86	... do.	... 1,273
Sinking wells ...	950 cubic yards	... 25 68	... cubic yard	... 24,595
Masonry in steining ...	485 do.	... 85 68	... do.	... 41,556
Hearting for wells ...	453 do.	... 21 46	... do.	... 9,723
Masonry in superstructure ...	929 do.	... 31 35	... do.	... 29,124
Bed blocks and coping ...	407 cubic feet	... 3 32	... cubic foot	... 1,354
Girders delivered in Colombo	128 tons	... 210 34	... ton	... 26,924
Transport of girders to site ...	128 do.	... 10 0	... do.	... 1,280
Erection and painting of girders	128 do.	... 307 29	... do.	... 39,322
Teak timber ...	305 cubic feet	... 5 0	... cubic foot	... 1,525
Excavation of inlet and outlet	—	... —	... —	... 616
Pitching	196 cubic yards	... 21 13	... cubic yard	... 4,143
Service works ...	—	... —	... —	... 13,748
Establishment ...	—	... —	... —	... 12,989
			Total	... 215,320

Sitawaka Flood Outlet Bridge.

One Span of 100 Feet at 38 Miles 31·50 Chains.

Description.	Quantity.	Rate. Rs. c.	Per	Amount. Rs.
Well curbs delivered in Colombo ...	11½ tons	83 21	ton	3,257
Transport of well curbs to site	11½ do.	10 0	do.	115
Setting and rivetting well curbs ...	11½ do.	22 34	do.	257
Sinking wells ...	400 cubic yards	11 62	cubic yard	4,650
Concrete in steining ...	261 do.	28 11	do.	7,339
Hearting for wells ...	242 do.	27 85	do.	6,742
Masonry in superstructure ...	186 do.	19 62	do.	3,650
Cement bed blocks ...	72 cubic feet	1 83	cubic foot	132
Girders delivered in Colombo	49 tons	213 30	ton	10,452
Transport of girders to site ...	49 do.	12 10	do.	593
Erection and painting of girders ...	49 do.	103 87	do.	5,090
Teak timber ...	103 cubic feet	5 0	cubic foot	515
Pitching	70 cubic yards	7 0	cubic yard	490
Service works ...	—	—	—	389
			Total ...	43,671

Bridge at 39 Miles 21 Chains.

One Span of 30 Feet.

Description.	Quantity.	Rate. Rs. c.	Per	Amount. Rs.
Wood well curbs ...	No. 2	251 96	each	504
Transport of well curbs to site	No. 2	5 50	do.	11
Sinking wells ...	85 cubic yards	23 34	cubic yard	1,984
Masonry in steining ...	105 do.	62 95	do.	6,611
Hearting for wells ...	32½ do.	12 44	do.	404
Masonry in superstructure ...	72½ do.	23 75	do.	1,722
Girders delivered in Colombo	9·1 tons	214 55	ton	1,931
Transport of girders to site ...	9·1 do.	10 0	do.	91
Erection and painting of girders ...	9·1 do.	19 70	do.	179
Teak timber ...	36 cubic feet	5 0	cubic foot	180
Pitching	614 cubic yards	6 2	cubic yard	3,692
Service works ...	—	—	—	526
Establishment ...	—	—	—	557
Open foundations (abandoned)	—	—	—	294
			Total ...	18,686

Bridge at 39 Miles 61 Chains.

One Span of 30 Feet.

Description.	Quantity.	Rate. Rs. c.	Per	Amount. Rs.
Excavating foundation ...	413 cubic yards	0 38	cubic yard	158
Concrete in foundation ...	97½ do.	16 50	do.	1,609
Masonry in superstructure ...	481 do.	14 8	do.	6,772
Bed blocks and coping ...	162 do.	1 85	do.	150
Girders delivered in Colombo	9·1 tons	212 20	ton	1,931
Transport of girders to site ...	9·1 do.	10 0	do.	91
Erection and painting of girders ...	9·1 do.	57 18	do.	520
Teak timber ...	36 cubic feet	5 0	cubic foot	180
			Total ...	11,411

Kanangama oya-Bridge.

One Span of 40 Feet at 43 Miles 71 Chains.

Description.	Quantity.	Rate. Rs. c.	Per	Amount. Rs.
Excavating foundation ...	422 cubic yards	2 45	cubic yard	1,033
Concrete in foundation ...	186 do.	16 97	do.	3,156
Masonry in superstructure ...	672 do.	12 8	do.	8,122
Coping	270 cubic feet	0 94	cubic foot	253
Girders delivered in Colombo	12¼ tons	211 10	ton	2,586
Transport of girders to site ...	12¼ do.	10 0	do.	123
Erection and painting of girders ...	12¼ do.	22 97	do.	281
Teak timber ...	46 cubic feet	5 0	cubic foot	230
Pitching ...	45 cubic yards	3 0	cubic yard	135
			Total ...	15,919

Bridge at 46 Miles 1 Chain.

Two Spans of 15 Feet (Arches).

Description.	Quantity.	Rate. Rs c.	Per	Amount. Rs.
Excavating foundation	648 cubic yards	1 4	cubic yard	676
Concrete in foundation	135 do.	17 0	do.	2,295
Masonry in superstructure	849 do.	14 50	do.	12,306
Arching	30½ do.	25 0	do.	762
Coping	236¼ cubic feet	0 92	cubic foot	219
			Total	16,258

Bridge at 47 Miles 39 Chains.

One Span of 40 Feet.

Description.	Quantity.	Rate. Rs. c.	Per	Amount. Rs.
Excavating foundation	329 cubic yards	0 96	cubic yard	317
Concrete in foundation	168½ do.	17 0	do.	2,865
Masonry in superstructure	813½ do.	13 98	do.	11,376
Bed blocks and coping	202½ do.	2 5	—	190
Girders delivered in Colombo	12¼ tons	211 10	ton	2,586
Transport of girders to site	12¼ do.	10 96	do.	134
Erection and painting of girders	12¼ do.	34 1	do.	417
Teak timber	46 cubic feet	5 0	cubic foot	230
			Total	18,115

Bridge at 47 Miles 69 Chains.

One Span of 40 Feet.

Description.	Quantity.	Rate. Rs. c.	Per	Amount. Rs.
Excavating foundation	2,467 cubic yards	0 63	cubic yard	1,550
Concrete in foundation	253½ do.	17 0	do.	4,310
Masonry in superstructure	744 do.	13 79	do.	10,260
Bed blocks and coping	262 cubic feet	1 96	cubic foot	153
Girders delivered in Colombo	12 tons	205 42	ton	2,465
Transport of girders to site	12 do.	11 23	do.	135
Erection and painting of girders	12 do.	33 82	do.	406
Teak timber	46 cubic feet	5 0	cubic foot	230
Dry filling behind abutments	150 do.	0 40	do.	59
			Total	19,568

Yatiyantota Road Bridge.

Three Spans of 100 Feet and two Spans of 30 Feet at 48 Miles 25 Chains.

Description.	Quantity.	Rate. Rs. c.	Per	Amount. Rs.
Excavation in foundation	1,344 cubic yards	3 34	cubic yard	4,491
Concrete in foundation	82 do.	22 58	do.	1,852
Iron well curbs delivered in Colombo	12½ tons	294 24	ton	3,678
Transport of well curbs to site	12½ do.	10 0	do.	125
Setting and rivetting well curbs	18 do.	170 89	do.	3,076
Wooden well curbs	5½ do.	528 91	do.	2,909
Sinking wells	1,706 cubic yards	11 86	cubic yard	20,232
Masonry in steining	568 do.	36 17	do.	20,542
Hearting for wells	726 do.	19 29	do.	14,011
Masonry in superstructure	1,516 do.	21 30	do.	32,295
Bed blocks and copings	214 cubic feet	3 46	cubic foot	740
Girders delivered in Colombo	205 tons	211 66	ton	43,390
Transport of girders to site	205 do.	14 40	do.	2,952
Erection and painting of girders	205 do.	97 6	do.	19,900
Concrete in flooring of bridge	100 cubic yards	8 55	cubic yard	855
Service works	—	—	—	9,666
Establishment	—	—	—	10,126
			Total	190,840

Analysis of Bridges with Wells or Cylinder Foundations.

	Name of River and Span.				
	* Kirilipane: one 100 ft. and one 60 ft.	† Puwakpitiya: two 100 ft.	‡ Sitawaka: four 75 ft.	§ Flood Outlet: one 100 ft.	‖ Yatiyantota: three 100 ft., two 30 ft.
Total cost of cylinders, or wells, including sinking and hearting	Rs. 30,358	19,237	83,655	22,360	64,573
Total depth of cylinders or wells	Lineal ft. 104	31	93	49	102
Total cubic contents of cylinders or wells	Cubic yds. 296	318	950	400	1,335
Cost of cylinders or wells, including sinking and hearting, per lineal foot	Rs. 292	622	900	456	633
Do. do. per cubic yard	„ 103	60	88	56	48
Total cost of erection of steelwork, including painting, but not transport	„ 7,204	6,653	39,322	5,090	19,900
Total weight of steelwork	Tons 80½	98	128	49	205
Cost of erection of steelwork, including painting, but not transport, per ton	Rs. 89	68	307	104	97
Total cost of piers and abutments, including foundations	„ 33,325	26,752	114,773	26,142	103,951
Total cost of steelwork, including transport, erection, and painting	„ 29,181	30,156	67,526	16,135	66,242
Total cost of timber, pitching, service works, establishment, and sundries	„ 5,587	12,698	33,021	1,394	20,647
Total cost of bridge	„ 68,093	69,606	215,320	43,671	190,840
Total lineal feet of span (clear waterway)	Lineal ft. 160	200	300	100	360
Cost per lineal foot of clear waterway	Rs. 426	348	718	437	530
Total area covered by lineal feet of clear waterway multiplied by average depth from rail level to bottom of founds	Square ft. 8,000	5,400	17,000	4,900	18,300
Cost per square foot of area, as above	Rs. 8·5	12·9	12·7	8·9	10·4

* All three piers founded on cast iron cylinders, filled with concrete.
† Centre pier founded on well, with wrought iron curb and masonry steining, and filled with concrete. Abutments on open foundations.
‡ West abutment on open foundations remaining four piers founded on wells, with wrought iron curb and masonry steining, and filled with concrete.
§ Both abutment piers founded on wells, with wrought iron curb and concrete steining, and filled with concrete and sand.
‖ Abutments on open foundations. Piers 1 and 4 on wells with wrought iron curbs and masonry steining; piers 2 and 3 on wells with wrought iron curbs and concrete steining; all wells filled with concrete.

VIII.—1904.

DESPATCH

RELATING TO

MALARIA AND THE TRAINING OF MEDICAL OFFICERS

IN THE TREATMENT AND PREVENTION OF

TROPICAL DISEASES.

Ordered by His Excellency the Governor to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 25 cents.

1904.

MALARIA AND THE TRAINING OF MEDICAL OFFICERS.

The Right Hon. J. CHAMBERLAIN, M.P., to Governor the Right Hon. Sir J. WEST RIDGEWAY, G.C.M.G., K.C.B., K.C.S.I.

Circular. Downing street, May 28, 1903.

SIR,—DURING my term of office I have addressed to the Governors of the Tropical Colonies various circular despatches on medical and sanitary subjects, more especially in connection with the investigation of malaria and the training of medical officers in the treatment and prevention of tropical diseases. In the present despatch I wish to summarize the steps which have been taken and the results which have followed, and also to make some suggestions as regards the future.

2. The great mortality among Europeans in such climates as those of the West African Colonies and Protectorates had not failed to attract my notice from the first, as it had that of my predecessors in office, and towards the end of the year 1897, largely through the interest taken in the matter by Dr. Manson, who had succeeded Sir Charles Gage-Brown as Medical Adviser of the Colonial Office, my attention was more definitely directed to the importance of scientific inquiry into the causes of malaria, and of special education in tropical medicine for the medical officers of the Crown Colonies.

3. In pursuance of the second of these two objects it was clearly advisable (*a*) that a special training school in tropical medicine should be established, where officers newly appointed to the Medical Services of the Colonies and Protectorates might be given systematic instruction with special facilities for clinical study before leaving England to take up their appointments, and where doctors already in the Service might, when on leave, have opportunities of bringing their professional knowledge up to date; (*b*) that all the leading medical schools in the United Kingdom should be invited to give greater prominence than hitherto in their schemes of study to tropical medicine; (*c*) that the medical reports periodically sent from the Tropical Colonies and Protectorates should be re-cast on one uniform type, designed to throw light on the diseases which are most prevalent in tropical countries, and to indicate the methods likely to be most successful in preventing or curing such diseases.

4. With reference to the first of these three objects, the provision of a special training school, it was considered that the Albert Docks Branch of the Seamen's Hospital, which was about to be enlarged, was likely to offer the facilities required, standing as it does at the dock gates, admitting sufferers from tropical diseases direct from ships from all parts of the world, and being, moreover, within easy reach of the Colonial Office and therefore likely to be in close touch with that office. These considerations decided me to approach the managers of this hospital in preference to endeavouring to make whatever arrangements might be possible for attaining the object in view at the Royal Naval Hospital at Haslar or the Royal Victoria Hospital for Soldiers at Netley, at which latter hospital officers of the Indian Medical Service receive instruction in tropical diseases.

5. On the 2nd February, 1898, a letter was by my directions addressed to the Committee of the Seamen's Hospital Society, asking whether, in the enlargement of their branch hospital at the Albert Docks, it might not be possible to provide accommodation for the contemplated tropical school. The letter stated that it was not probable that more than six officers would be under instruction at any one time, and that the course of instruction should last for three or four months. The Committtee of the hospital were asked on what terms and conditions they would be prepared to make the necessary arrangements.

6. Answering on the 16th April, the Committee stated their opinion that there was in the Society's hospitals and dispensaries clinical material for the study of tropical diseases which could not be found elsewhere in the United Kingdom in the same amount and variety. They estimated that, if a school for tropical diseases was to be formed in connection with their branch hospital at the Albert Docks, it would be necessary, instead of enlarging the number of beds, as they had already arranged, from 18 to 30, to raise it to 45; that this new wing would cost in construction approximately £10,000, and in maintenance £2,000 per annum; and that the school buildings would cost in construction approximately £3,500, and with six students to be resident on the premises, in maintenance £1,100 per annum. They suggested that the fee for a course of not less than four weeks should be—

	£	s.	d.
Resident students per week	4	4	0
Non-resident students per week	2	2	0

and they added that they would propose also to admit to the school students other than those sent by the Colonial Office.

7. On the 30th June following, after communication with the Lords of the Treasury, I was able to accept the scheme which the Committee had put forward, on the terms—

(1) That a contribution of £3,550, the exact sum given in the estimate as the initial cost of school buildings, should be made on behalf of the Colonies and Protectorates concerned;
(2) That the fees should be as stated in the Committee's letter;
(3) That a representative of the Colonial Office should be admitted to the Board of Management of the hospital.

These terms were accepted in a letter of the 14th July, 1898. To the allotment of the expenditure which was thus guaranteed further reference will be made.

8. On the 11th March, 1898, I caused a letter to be addressed to the General Medical Council and the leading medical schools of the United Kingdom, pointing out the importance of ensuring that all medical officers selected for appointment in the tropics should enter on their careers with the expert knowledge requisite for dealing with such diseases as are prevalent in tropical climates, and stating that, while special arrangements would be made for giving clinical instruction in tropical medicine, it was very desirable that, before undergoing such special training, the future medical officers of the Colonies should be given facilities in the various medical schools for obtaining some preliminary knowledge of the subject. It was added that, in order to encourage the study of tropical medicine in the schools, I would be prepared to give preference in filling up medical appointments in the Colonies to those candidates who could show that they had studied this branch of medicine, especially if some certificate or diploma to that effect were forthcoming.

Most of the answers to this letter were sympathetic and encouraging, and the correspondence showed that in upwards of twelve British medical schools, some of them situated at large seaports, arrangements either already existed or were about to be made for giving special instruction in tropical medicine. A resolution was adopted by the General Medical Council in the following terms:—

> "That, while the Council is not prepared to recommend that tropical medicine should be made an obligatory subject of the ordinary medical curriculum, it deems it highly desirable, in the public interest, that arrangements should forthwith be made by the Government for the special instruction in tropical medicine, hygiene, and climatology of duly qualified medical practitioners who are selected for the Colonial Medical Service, or who otherwise propose to practise in tropical countries."

9. Meanwhile, on the 2nd February, 1898, Sir C. Gage-Brown was asked to preside over a Committee, the members of which, in addition to himself, were Dr. Manson and three other doctors of long Colonial experience, to consider a suggestion of Dr. Manson's that some uniform scheme for the medical reports of the Colonies should be devised; that the scientific portions of such reports should be published in a separate volume; and that the volume should contain an appendix in which would be printed special papers upon the particular diseases of the different Colonies.

On the 4th July these gentlemen submitted their recommendations; a model medical report, which they had prepared, was sent out to the Colonies in my circular despatch of the 25th July, 1898; and, when the replies to the circular had been received, Dr. Manson was good enough, in the light of such suggestions as had been made, to revise the form of the report, which was sent out in its final shape in my circular despatch of 27th April, 1900, with an expression of hope that the model would be conformed to so far as the circumstances of each Colony would admit.

The form is now in general use, though it does not even now receive as full attention as might be wished, and as I hope it will receive in future. The reports, when received, are collated by Dr. Manson, the more important of them being published and presented to Parliament, but the publications would be more valuable if medical officers in the Colonies generally appreciated the object in view as fully as it has in some cases been recognized.

10. When the arrangements had been concluded with the Seamen's Hospital Society for making provision for a School of Tropical Medicine, I wrote on the 6th July, 1898, to Lord Lister, then President of the Royal Society, telling him of what had been done, but adding that "I am not satisfied to rest at this point, and wish to invite the co-operation of the Royal Society in taking further steps." I went on to suggest that a thorough investigation should be undertaken by scientific experts on the spot into "the origin, the transmission, and the possible preventives and remedies of tropical diseases, especially of such deadly forms of sickness as the malarial and blackwater fevers prevalent on the West African Coast," and that the inquirers should be appointed by and take instructions from the Royal Society. I asked for a grant for the purpose from the funds of the Royal Society, promising that an equal amount would be forthcoming from Colonial funds; and suggested that a Committee of the Royal Society should be appointed to confer with representatives of the Colonial Office on the subject.

The Council of the Royal Society immediately appointed a Committee, as proposed, and made an initial grant of £300 towards the object in view. The negotiations went forward, and eventually it was decided that two inquirers should be nominated by the Royal Society, and one—a member of the Colonial Medical Service—by the Secretary of State; that the whole expenses of the third inquirer should be paid from Colonial funds; and that from those funds a sum not exceeding £2,400 should be contributed towards the expenses of the other two, the Royal Society contributing the balance estimated at £600. The inquirers were to take instructions from a Committee, on which members of the Royal Society were to be supplemented by two representatives of the Colonial Office, one of them being Dr. Manson. Thus, by September, 1898, arrangements had been made for instituting a School of Tropical Medicine and a scientific inquiry into malaria.

11. Before tracing further the progress made in each direction it will be well to note how the necessary funds were provided and the expenditure allotted. Of the sum of £3,550 which was guaranteed to cover the cost of building and equipping the Tropical School, the Lords of the Treasury, in a letter dated 18th June, 1898, consented to contribute one-half from Imperial funds, "on the understanding that such Imperial grant will defray the shares of all Exchequer-aided tropical Colonies and Protectorates in such initial cost, and that the remaining moiety thereof will be contributed by other Colonies and the Niger Coast Protectorate." This left to the Crown Colonies likely to be benefited by the new proposals to provide £1,775 for the Tropical School and £4,400 for the Malaria Commission, the total cost of which, including the expenses of all three inquirers, was finally estimated at £5,000, of which only £600 would be provided from Royal Society funds.

As the two objects were akin, I decided to ask the Crown Agents to open a common fund, and, taking into consideration what Colonies would be likely to reap most benefit from the proposals if

successfully carried out, and what Colonies could afford to contribute most liberally, I invited contributions as under :—

	£
Gambia	200
Sierra Leone	300
Gold Coast	1,000
Lagos	1,000
Niger Coast Protectorate	1,000
Ceylon	650
Straits and Malay States	650
Hong Kong	500
Trinidad	500
Jamaica	500
British Guiana	500
Mauritius	150
Fiji	100

The total asked for was £7,050 as against an estimated expenditure of £6,175, leaving a margin for contingencies. One-half of the sum required was invited from the British Colonies and Protectorates in West Africa, as being most vitally concerned in the object to which the money was to be devoted; and, as the work of the Malaria Commission was expected to extend over two years, it was suggested that the contributions might be made in two annual instalments.

The response from the Colonies was very satisfactory. Ceylon contributed £1,000, the Straits Settlements and the Federated Malay States between them nearly the same amount, Trinidad £700, and all the other Colonies the sums which were asked from them, though I only accepted £250 from Jamaica in view of the condition of the island's finances at the time when the money was voted.

Only £150 was asked for from Mauritius, a small sum in proportion to the size and importance of the Colony and to its interest in the schemes. This was due to the fact that the financial condition of the Colony at the time did not warrant a large contribution. Subsequently a further sum of £100 was invited from the Colonial Legislature and readily voted; and other supplementary contributions—which enabled the work of the Malaria Commission to be prolonged—were £100 from St. Lucia and £50 each from Southern Nigeria, Gold Coast, and British Honduras. The entire management of the fund was left to the Crown Agents, who realized by investments £300, and a statement of receipts and expenditure is appended.* It will be noted, on the expenditure side, that some of the money was applied to a supplementary expedition to the Campagna, to which reference will be made hereafter.

There are two or three small outstanding claims which have not yet been settled, but it is anticipated that the unexpended balance of the fund will amount to about £150, which might be transferred to the new fund referred to in the last paragraph of this despatch if the scheme which I propose in that paragraph commends itself to the Crown Colonies and Protectorates.

12. In anticipation of the opening of the Tropical School a circular despatch was on the 19th August, 1898, addressed to the Governors of Crown Colonies, which enclosed a short memorandum inviting for use in the school the collection of pathological specimens, and any material likely to be of value for teaching purposes. On the 15th December following, a copy of that despatch was sent to the self-governing Colonies. The 2nd October, 1899, was named by the Committee of the Seamen's Hospital Society as the date at which the school would be opened. In the meantime the Committee had consented to an arrangement, subsequently communicated to the Governors of tropical Colonies in my circular despatch of 19th September, 1900, under which the Managers were prepared to admit into the Society's hospital at special rates, varying according to circumstances from one guinea to two guineas a week, officers in the Colonial Service whose cases were considered to be suitable for treatment as tropical cases, within wards devoted to the special treatment of tropical diseases. The arrangement was to be confined—unless under very exceptional circumstances—to the cases of officers with salaries not exceeding £400 per annum, and the Secretary of State was prepared to guarantee the payments due from such officers by authorizing, if necessary, deductions from their salaries, provided that in each case admission at the privileged rates was made with his knowledge and sanction.

13. The school having been opened on the 11th November following, I sent out to the Colonies in a circular despatch its syllabus, and a statement of the rate of tuition fees and the fees for board and residence. The Colonial Governments were invited to concur in the following arrangements for the training of Colonial medical officers :—

(*a*) That all such officers, who might in future be selected by the Secretary of State, should undergo a two months' training at the school.

(*b*) That the cost of tuition, board, and lodging during that period should be borne by the Colonial Governments, the officers signing a bond to refund the expenditure in the event of their relinquishing their appointments on other grounds than those of health within three years.

(*c*) That the tuition fees, but not the fees for board and lodging, should be paid by the Governments in the case of medical officers already in the Service who might desire, or be required, to attend a course of instruction while on leave of absence. The cost of tuition fees only for an eight weeks' course was stated at £11 12*s.*, and that of tuition, board, and residence for the same term at £30 17*s.* 4*d.* As these sums were not large, I took upon myself to bring the scheme into operation in anticipation of the concurrence of the Governments concerned, but that concurrence was in most cases readily given, though there was some difference of opinion and practice, more especially as regards payments in the case of doctors already in the Government Service.

14. I noted in this circular that a School of Tropical Diseases had been recently established and excellently equipped at University College, Liverpool, and proposed that medical officers already in the Service should have the option of receiving their instruction either in Liverpool or in London, but added that newly-appointed officers would always be sent to the London school. I saw cause in the following year to reconsider this last decision, and to place the Liverpool school on the same footing as the London school, as regards newly-appointed officers also. To this point I will recur later on.

* See Enclosure No. 1.

15. It has been found that urgent need for immediate medical aid in one or other of the Colonies from time to time, and especially during the continuance of the war in South Africa, has made it necessary to send out doctors who have not gone through the prescribed course at London or Liverpool, but such omissions are minimized as far as possible. It was found necessary, too, to call the attention of medical officers already serving in the Colonies, who might wish or be required to take a course of instruction while on leave, to the desirability of joining the schools at the beginning of a session. This was done by my circular despatch of 31st May, 1901.

16. I may here notice that, owing to the improvement in the supply of suitable candidates for the West African Medical Staff, steps are now being taken to establish a Reserve of medical officers for the West African Colonies and Protectorates, so that, on the occurrence of vacancies, it may be possible to send out with the minimum of delay doctors who have received a proper course of training in tropical medicine at the London or Liverpool schools. It is proposed that the doctors selected for the Reserve shall be sent to one or other of the schools for a full course of three months; that in addition to their fees for tuition, board, and lodging, they shall receive an allowance at the rate of 5*s*. a day for the period during which they are under instruction and for a reasonable period between the end of the course and the date of embarkation for West Africa. It is also proposed that all doctors whose fees are paid by Colonial Governments shall, before proceeding to take up their appointments, be required to pass an examination, or to obtain a certificate of proficiency, which will show that they have profited by the instruction given to them; and in the event of their failing to qualify in this respect their appointments will not be confirmed, and they will be required to refund any payments made on account of their expenses. Similarly, doctors already in the Colonial Service, who attend courses, will be required to refund the fees unless they are certified to have made good use of their time and opportunities at the school.

17. Between the 2nd October, 1899, and the 15th April, 1903—that is to say, during a period of about three years and a half—292 students passed through the London school, viz. :—

British Government Service :—		British private students, missionaries, &c. ...	113
Colonial Office	116	Foreign Government Service ...	13
Foreign Office	13	Foreign private students ...	22
Indian Medical Staff	11		292
Royal Army Medical Corps ...	1		
Royal Navy	3		
	144		

I am informed that the average attendance at lectures and demonstrations has been over 90 per cent. of the total number of students at the school.

The appliances in the school are well up to date, and the constant presence of a medical superintendent and tutor ensures that all special diseases are demonstrated and investigated as opportunity arises.

I am informed by the Committee of Management that up to the present time the school has just paid its way on the receipts from tuition and from board and lodging fees. Thus, for the period from the 2nd October, 1899 (when the school was first opened) to the 31st December, 1899, there was a deficit of £14 17*s*., for the year 1900 there was a surplus of £78 9*s*., for the year 1901 there was a small deficit of 13*s*. 4*d*., and for the year 1902 there was a surplus of £108 5*s*. 5*d*.

18. Owing, however, to the success of the school the Managers consider that it is now necessary to place matters on a wider basis. The present buildings are too small, whether from a tutorial or from a research point of view. There is only proper accommodation for sixteen students in the laboratory, while the average attendance of students is 24. Research laboratories, a lecture theatre, and museum, are said to be much needed, and the library requires enlargement. The residential accommodation should also be increased. At present there is only accommodation for six resident students, the number contemplated when the scheme was first set on foot, whereas it is considered that there should be sufficient accommodation for at least 20. Up to November last the Managers had expended a sum amounting to £16,098 on the enlargement of the hospital, and one of £6,676 on school buildings, furniture, and equipment, £3,550 out of this last sum having been, as already stated, contributed by the Imperial and Colonial Governments, in addition to £1,000 given by the Government of India. A sum of £12,000 is now stated to be required to cover the cost of the new buildings, and to meet this expenditure a sum of no more than £3,000 is at present available.

19. It will be seen from the above that the school has carried out a great deal of teaching work. Much of the work has been done by lecturers who have received only a nominal remuneration, and the Committee of Management consider—and, I think, rightly consider—that in order to place matters on a sound basis the lectureships should be permanently endowed. An additional sum of money will be required for this purpose, as well as for the extension of the research work of the school, to which I shall refer hereafter.

20. The Governments of Ceylon, the Straits Settlements, the Federated Malay States, and Hong Kong have each promised a subsidy of £100 per annum for five years towards the revenue of the school, and some munificent private donations have been received; but these contributions are, I am assured, insufficient to meet the growing requirements, and the Committee of Management are endeavouring to raise a large capital sum for the various objects referred to above. Whatever may be the result of their fresh efforts, it may safely be said that the policy which resulted in establishing the school has up to the present time been fully justified.

21. I will now return to the question of the scientific inquiry into malaria. The experts who were selected for two years' work under the Malaria Committee were Dr. Daniels of the British Guiana Medical Service, nominated by myself, and Drs. Stephens and Christophers of Cambridge University and University College, Liverpool, respectively, nominated by the Royal Society. It was decided that they should, in the first instance, at any rate, carry out their investigations in the British Central Africa Protectorate, from Blantyre as a centre: Blantyre having been suggested as a comparatively healthy place on the edge of the malarious zone and as possessing facilities for the desired investigation, such as a hospital and hospital appliances.

Before starting for Central Africa early in December, 1898, Drs. Stephens and Christophers paid a short preliminary visit to Italy; they reached Blantyre about the beginning of February, 1899.

Dr. Daniels, being seconded from British Guiana, proceeded to India in November, 1898, and studied for between two and three months under Major Ross, subsequently joining his colleagues at Blantyre on 8th April, 1899.

22. In the meantime it was suggested by the Malaria Committee that, with a view to obtaining exact knowledge of the different species of mosquitoes and allied insects in the various tropical Colonies, it would be well if collections of the winged insects in those Colonies which bite men or animals could be made and sent to the Natural History Museum, where Professor Ray Lankester undertook to have them examined and classified. A circular despatch to that effect was written to the Crown Colonies on the 6th December, 1898, a copy of it being sent to the self-governing Colonies on the 15th of that month; and on the 8th September, 1900, a further circular was sent enclosing copies of a preliminary report received from the Trustees of the Museum on the collections which had been received. The specimens so collected have enabled the Trustees of the British Museum to publish, under the editorship of Mr. Theobald, a monograph on the Culicidæ, the great scientific and practical value of which has been shown by the first edition being almost immediately exhausted.

23. In June, 1899, Drs. Stephens and Christophers telegraphed to the Royal Society urging that their stay in Central Africa should not be prolonged beyond the following August, owing to the scarcity of cases of the kind required for study and the insufficiency of the hospital accommodation. They were, after some correspondence, authorized to leave, with a view to proceeding to West Africa. They left British Central Africa accordingly on the 20th September, 1899; and, after returning to this country, sailed for Sierra Leone on the 9th December, 1899, subsequently visiting the Gold Coast and Lagos. They returned to this country in November, 1900; and in April, 1901, as it had been decided to prolong the term of their engagement, Dr. Christophers left for India, where Dr. Stephens had already gone, in order to continue the investigation for one more year. Dr. Stephens was obliged through ill-health to return to this country before the year's work was fully completed, but Dr. Christophers's services were retained in India for an additional six months, and his engagement was not concluded until last autumn.

24. Dr. Daniels, having dissented from his colleagues as to the desirability of leaving British Central Africa, which he considered an eminently suitable field for inquiry, was authorized to remain there when they proceeded to West Africa. He continued his work in these districts until July, 1900, when, on account of an attack of blackwater fever, he was compelled to return to England. On his return to England his work in connection with the Malaria Commission ceased, the two years which had been originally contemplated in the case of the Commission having nearly expired. He took up the position of Medical Superintendent of the London School of Tropical Medicine, and in August, 1901, sailed for Sierra Leone to join a Malarial Investigation Commission under Major Ross which had been sent out by the Liverpool school.

25. The inquirers communicated the results of their work to the Malaria Committee in a series of reports which were published by the Royal Society. In the circular despatches noted in the margin* printed copies of these reports were sent to the Colonies. A general summary by Drs. Stephens and Christophers of their work, written in less technical language than are the reports themselves, together with a covering report upon it by the Malaria Committee, forms an enclosure† to this despatch.

26. While these gentlemen were at work in the investigation of malaria in Africa it was suggested by Dr. Manson in January, 1900, that in view of the results which Italian medical experts had already achieved in the way of preventing malaria by the use of mosquito netting, the experiment should be tried of erecting in some notoriously malarious spot in the Roman Campagna a hut specially designed to exclude mosquitoes, and that two observers, sent out from this country, should live in the hut during the night throughout the malarious season, the activity of the malaria-bearing mosquito being mainly confined to the night time. He asked for a sum of £500 from Government funds to cover the cost of the experiment, excluding the expenses of one of the two observers who would be sent by the London School of Tropical Medicine. This sum was allowed from the funds at the disposal of the Malaria Committee and was subsequently supplemented by a further sum of £150; a mosquito-proof hut was constructed under Dr. Manson's directions and sent out to Italy in May, 1900; and the two observers, Dr. Sambon and Dr. Low, started in the same month for Rome, where they received every assistance from the Italian authorities. They remained at the hut in good health throughout the malarious season, sending periodical reports, and returned at its close, having established beyond dispute that protection against mosquitoes carries with it immunity from malaria. Mosquitoes which were sent to England from the same district during their sojourn were found to convey malaria to healthy subjects in this country.

27. I have stated that one of the two observers in this instance, viz., Dr. Low, was sent by the London School of Tropical Medicine, holding a Travelling Scholarship, which was established by Mr. J. G. Craggs, M.V.O., in connection with the school for three years from the 1st January, 1900. Dr. Low subsequently visited the West Indies and Uganda, carrying out research work in connection with filariasis and sleeping sickness, and making recommendations of practical value as to the sanitary conditions of the places which he visited. I understand that he is held to have conclusively demonstrated that *Filaria nocturna*, like the malaria parasite, is conveyed by mosquito bite. This reference to Dr. Low's work is made in order to illustrate the fact that the services of the London School of Tropical Medicine have not been confined to teaching, but have also included research of a valuable kind. Encouraged by these and similar researches, the Committee of Management now desire to found two Travelling Scholarships with a salary of £300 a year each, so that investigations can be carried on continuously in more than one direction. I should mention here that a laboratory for the investigation of tropical disease has been established at Kuala Lumpor in the Federated Malay States, and that the Federal Governmnet have provided the necessary funds for the salaries of a Director and two Assistants. An arrangement has been made by which the Medical Superintendent and Tutor of the London school and the Director of the laboratory at Kuala Lumpor are to replace each other for certain periods, and there is every reason to hope that this system of interchange will be attended by good results as regards both teaching efficiency and research.

28. Having thus alluded to some of the research work which has been carried out under the guidance of the London school, I now wish to call attention to the work which has been done in

* July 19, 1900; August 29, 1900; January 25, 1901; May 16, 1901; and April 11, 1903.
† See Enclosure No. 2, Royal Society to Colonial Office, April 24, 1903.

this respect by the Liverpool School of Tropical Medicine. The answer to my first circular letter to the principal medical schools of the United Kingdom, which was received from the Dean of the Medical Faculty of the Victoria University, Liverpool, pointed out that there were exceptional facilities in the hospitals of Liverpool for the study of tropical diseases, and stated that arrangements had been made for the delivery of special lectures on this branch of medicine. At the beginning of 1899 I was advised that a Liverpool School of Tropical Diseases was being established in connection with University College and the Royal Southern Hospital in that city, and was asked that in addition to formally recognizing the certificate given by the school Government should contribute an annual grant towards its maintenance and a lump sum towards a building scheme. It was explained in reply that, as Imperial and Colonial subscriptions had been recently invited for the London School of Tropical Medicine and the Malarial Investigation Commission, it would not be possible at that time to invite further subscription for similar objects in Liverpool. I was then pressed to consent that the specified course of training for newly-appointed Colonial medical officers might be given indifferently in either London or Liverpool, thus placing the Liverpool school, as far as Government recognition was concerned, on exactly the same level as the school in London. As already stated, I declined at first to modify the existing scheme, which had been carefully thought out before being approved, preferring to wait until it had been in actual working for a short time. Subsequently, in July, 1900, assured of the excellent work which had been done in Liverpool, and of the peculiar advantages which that great seaport offers for the study of tropical diseases, I was glad to make the desired concession.

29. The Liverpool school was opened on the 21st April, 1899, and at the end of the following July a research expedition, organized in connection with it and headed by Major Ross, was despatched to Sierra Leone. The Committee of the school applied to the Colonial Office for a grant in aid of this and similar expeditions, but the only possible answer was that such funds as were available were required to cover the cost of the Malaria Commission which the Royal Society had helped to organize.

The Governor of Sierra Leone was, however, asked to give Major Ross's party every assistance, and the expedition resulted in identifying the particular species of anopheles mosquito by which malaria is conveyed in that district. This expedition was succeeded by others sent not only to West Africa, but also—in connection with yellow fever—to Brazil; an expedition to the Gold Coast, which started in October last, being the eleventh enterprise of the kind which had been organized by the Liverpool school. Appreciation of the work of the school has been publicly expressed by more than one West African Governor, and its equipment has recently been brought up to date by the opening of a large laboratory specially devoted to the study of tropical medicine.

The school has, therefore, amply justified the special recognition which it sought for and obtained from the Government; and, in view of the large amount of money which has been contributed from private sources, I am not surprised that the Committee have asked in a recent appeal for a "grant from His Majesty's Government of £500 per annum for, say, five years, renewable at the end of that term on inspection and report by officers of the Colonial Department."

30. Before leaving this branch of the subject it may perhaps be useful to summarize in the fewest possible words the more important part of the research work which has been or is being carried out by the schools. A great advance has been made towards the solution of the malaria problem. In the West Indies filariasis and the causes of its prevalence have been made the subject of inquiry, and simple measures have been suggested by which it might be eradicated. Investigations have been made into the nature, cause, and prevention of beri-beri, a disease widely spread and responsible for heavy mortality, especially in the Malay Peninsula. In Uganda some progress has been made in examining the causes and conditions of the deadly sleeping sickness, while in West Africa and Uganda a new disease (trypanosomiasis) has been discovered and is now being scientifically investigated.

31. At no other place in the United Kingdom, up to the present time, have such opportunities presented themselves for the study of tropical diseases as at London and Liverpool; and it may be open to question whether the multiplication of tropical schools on the same lines as those which have been established at these two centres is to be desired; but this does not imply want of appreciation of the attention which is being given to the subject in the other medical schools of the Kingdom. The correspondence which passed—*e.g.*, with Edinburgh University, with King's College, London, and with Queen's College, Belfast—showed the wide interest which was being taken in this branch of medicine and the desire of important medical schools that their efforts in this direction should be duly recognized by the Government. Lately I have been glad to learn that the Special Board of Medicine of Cambridge University have proposed to institute a Special Examination in Tropical Hygiene and Medicine, open to all duly qualified medical practitioners, with a view to granting a diploma in these subjects.

32. The results of what has been done must still be mainly in the future, and it would be matter for satisfaction if no more had been achieved than to stimulate active inquiry and to give additional and special knowledge to a certain number of young medical men destined for the Colonies; but, as a matter of fact, some practical steps have already been taken based on the experience which has been gained.

33. My circular despatch of 17th November, 1900, enclosed copies of a short memorandum, drawn up by Sir Michael Foster and approved by Lord Lister in the previous July (both being members of the Malaria Committee), on "Measures to be taken for the Prevention of Malaria." The recommendations contained in this leaflet were based on the assurance that "Recent researches have shown that, at least in the vast majority of cases, probably in all cases, the organism is introduced into the blood, and thus the disease contracted, by the bite of a mosquito, generally, if not always, one species or other of the genus known as anopheles," and practical suggestions were made for the prevention of mosquito bites, *e.g.*, by the use of thin meshed gauzes for dwelling-houses; by avoiding sleeping or living near native huts or other haunts of malaria-infected anopheles; and by taking measures directed towards the extirpation of these insects, such as filling up pools and puddles, which are their common breeding places.

34. On the following 20th April, 1901, I addressed another circular despatch to the Colonies embodying the recommendations of a Committee appointed to consider "what practical suggestions, if any, could be made to the Governors and Administrators of the different Tropical Colonies and

Dependencies with a view to diminishing the risk from malaria to health and life, more especially in the case of Government officials."

35. The appointment of this Committee was due to a letter from Dr. Manson to the Colonial Office, dated 24th September, 1900, in which he wrote that "the experiments based on the mosquito malaria theory, which have been instituted by representatives of the Colonial Office and the London School of Tropical Medicine, have reached such a stage and have proved so successful that I venture to submit that the time has come for energetic practical action based on this theory." He made various suggestions, in which Lord Lister and Sir M. Foster expressed general concurrence, one being that a small Committee of experienced Colonial Officials then in England should be constituted to frame regulations on the lines which he sketched out. Accordingly such a Committee was formed, under Lord Onslow's chairmanship, and their recommendations, as embodied in my circular, referred to such matters as choice of sites for buildings, use of wire gauze and mosquito nets, and giving publicity to a large poster with diagrams on "Malaria: its Cause and Prevention," which Dr. Manson was good enough to prepare, and copies of which formed an enclosure to the despatch. I abstained from offering any opinion myself on the suggestions, not having the requisite professional or local knowledge; but I invited expressions of their views from the various Governors, and have of course left them to use their discretion, with the guidance of the medical men on the spot, as to what exact steps might be taken and how far the results of the recent experiments could be usefully adopted.

36. In West Africa, to which I may more specially refer, strong efforts have been made under the guidance of the Liverpool expeditions to extirpate the malaria-bearing mosquitos in townships, as at Bathurst in the Gambia and Freetown in Sierra Leone. These operations have entailed a considerable expenditure upon the Liverpool School of Tropical Medicine, and also upon the local Governments, who are now incurring still further expense in carrying on the work already begun.

The Sierra Leone Government is also incurring expenditure amounting to upwards of £30,000 in the construction of a railway to the hills in the neighbourhood of Freetown, with the special object of providing healthy sites on higher ground, removed from the centre of native population.

On the Gold Coast a definite scheme of sanitary organization and improvement has been drawn up for Cape Coast, the most unhealthy town of the Colony, on the basis of a report by Dr. Logan Taylor of the Liverpool school, and is being carried into effect as opportunity offers. The town of Secondee has been laid out by the Government on modern lines, the European quarter being kept distinct from the native, with a view to diminishing the risk of infection from malaria. Tanks under Government control have been made mosquito-proof, wells have been covered, and all pools which form the breeding-places of mosquitoes are being filled in as far as practicable.

In Lagos Sir W. MacGregor has taken active and personal interest in the problem of combating malaria, and has adopted such practical measures for reducing the unhealthiness of the Colony as filling up swamps and pools on the island, and on the mainland in the neighbourhood of the railway, providing mosquito-proof houses, purifying wells and supplying rainwater tanks, spreading knowledge of elementary hygiene among the natives by means of lectures delivered by medical officers, and establishing dispensaries and outstations for the distribution of quinine.

In Southern Nigeria steps have been taken, with considerable success, to improve the sanitation of Akassa, in accordance with the suggestions made by Dr. Annett of the Liverpool school. A scheme has also been recently initiated for establishing European reservations at the larger stations, the cost of sanitary improvement being met partly by Government and partly by rates paid by the inhabitants.

In Northern Nigeria the work of occupation and settlement has not given much opportunity for carrying out sanitation to any large extent, except at Lokoja.

37. I have not yet referred to the question of providing trained private nurses for the Crown Colonies. Soon after I became Secretary of State this question came before me, and on the 26th and 27th June, 1896, I addressed two circular despatches to the Colonies, one enclosing certain recommendations made by a Committee of medical officers connected with the Colonies, who, under the chairmanship of Sir Charles Gage-Brown, were good enough, at my request, to consider the question; the other forwarding and commending the scheme of the then newly-formed Colonial Nursing Association. The Association have received a grant of £500 from the Government of the Federated Malay States, and are paid a fee of £2 2s. for each nurse selected by them for the Government Service of the West African Colonies and Protectorates, but I am not aware that they receive any other support from the Colonial Governments. I attach very great importance to this subject of nursing, and more especially to the training of native women under the supervision of nurses sent out from this country. I therefore cordially recognize the value of the work done by the Colonial Nursing Association.

38. The above is an outline of what has been attempted in the direction of improving health and sanitation in the Tropical Colonies and Protectorates, and the Governments concerned will, I think, realize that the contributions which they have given have been applied to objects second to none in importance and public usefulness. But it is clear that the work cannot stand still, and as long as those who can speak with the authority of science are confident that by human effort the rate of mortality from malaria and other tropical diseases can be greatly reduced and the strength and efficiency of European residents in unhealthy climates can be sensibly increased, so long, in my opinion, ought funds to be forthcoming for carrying on what has been so well begun. It will be seen from the important letter from Sir M. Foster, of which I enclose a copy,* that in his opinion great expenditure and more extended effort is required to grapple with the whole problem of exotic diseases among not only human beings, but animals also, and to systematize the knowledge of such discoveries as may be achieved. The details of such a scheme would require very careful consideration, but in any case the Colonies are likely to be vitally concerned for many years to come with the following objects: research into malaria and other tropical diseases, in which I am assured that the Royal Society, to whom my warm acknowledgments are due, will continue to co-operate; the Schools of Tropical Medicine, pre-eminently those of London and Liverpool; and the supply of trained nurses. One or other of these objects may more specially commend itself to this or that Colony, but I am inclined to think that as a fund was successfully formed for the double object of the London Tropical School and the Malaria Commission, so Colonial contributions, if and when made, might with advantage continue to be paid into a common fund, out of which the objects which have

* See Enclosure No. 2.

formed the subject of this despatch might be subsidized. Should I find that this opinion is shared, and that there is a general desire on the part of the Crown Colonies and Protectorates to give moderate donations or subscriptions in aid of medical and sanitary training and research, I should propose to appoint a Board to advise the Secretary of State as to how the moneys received can at any given time be best allotted, such Board to consist of the Medical Adviser of the Colonial Office, a representative of the Royal Society, some leading London physician, one or more representatives of the Crown Colonies, and one or more members of the Colonial Office.

I have, &c.,

J. CHAMBERLAIN.

Enclosure No. 1.

Statement of Receipts and Expenditure of the Malarial Fever Commission Account.

Receipts.	£	s.	d.	Expenditure.	£	s.	d.
Southern Nigeria ...	1,050	0	0	Preliminary ...	30	19	6
Gold Coast ...	1,050	0	0	Books, appliances, &c. ...	395	3	1
Lagos ...	1,000	0	0	Salaries and allowances ...	5,242	7	1
Trinidad ...	700	0	0	Passages ...	549	0	10
Hong Kong ...	500	0	0	Freight and charges ...	35	7	10
British Guiana ...	500	0	0	School of Tropical Medicine ...	1,775	0	0
Gambia ...	200	0	0	Expenses in connection with mosquito-proof hut, &c. ...	307	16	7
Straits Settlements ...	489	11	8	Iron building ...	219	14	11
Sierra Leone ...	300	0	0	Expenses in connection with report ...	185	18	2
Ceylon ...	1,000	0	0	Translating ...	10	10	0
Federated Malay States ...	494	15	10		8,751	18	0
Mauritius ...	250	0	0				
Jamaica ...	250	0	0				
Fiji ...	100	0	0				
St. Lucia ...	100	0	0				
British Honduras ...	50	0	0				
Royal Society ...	600	0	0				
Interest on Advances ...	303	10	10	Balance in hand to March 31, 1903 ...	186	0	4
	£8,937	18	4		£8,937	18	4

Details of Balance.

	£	s.	d.
Cash lent at interest ...	185	0	0
Cash in hand ...	1	0	4
	186	0	4

Dr. Christophers has drawn salary to June 7, 1902.
Dr. Stephens has drawn salary to March 28, 1902.

Enclosure No. 2.

Royal Society to Colonial Office.

(Received April 24, 1903.)

Burlington House, London, W.,
April 24, 1903.

Sir,—I have the honour to inform you that the last report of the Malaria Commission has now been passed for press; hence, the actual investigations having been completed some time back, the labours of the Commission may be considered at an end. I take the opportunity to pass in brief review, on behalf of the Malaria Committee, what has been accomplished by the Commission. And I enclose a memorandum by Drs. Stephens and Christophers, in which these observers expound their own views as to the result of their researches, more especially in respect to native malaria, the prevention of malaria, and the nature of blackwater fever.

At the time when the Commission consisting of Drs. Daniels, Stephens, and Christophers was appointed the manner in which the malaria parasites are communicated to man by the mosquito had been clearly indicated by the researches of Ross. But as the evidence in favour of his view rested as yet simply upon his individual testimony, it seemed desirable that his observations should be subjected to independent criticism. This part was undertaken by Dr. Daniels, who, in 1898, proceeded to India for that purpose. He repeated Ross's experiments under his directions, and confirmed in every particular his facts and conclusions. Meanwhile, the other two members of the Commission were engaged in researches in British Central Africa, where, for reasons which need not be detailed here, it was decided that they should begin their investigations. Daniels joined them after completing his mission to Ross, but he worked for the most part independently. Valuable observations were made by all the members of the Commission, but, partly for the reason that the opportunities for making observations were not so great as had been anticipated, their labours in British Central Africa, though extending our knowledge in several respects, cannot be said to have produced any very striking results. The investigations conducted there were chiefly of an introductory and preparatory character. Returning to England in 1899, Drs. Stephens and Christophers, now fully acquainted with all the recent results obtained in India by Major Ross and in Italy by various observers, proceeded in the same year to the West Coast of Africa. Here their researches confirmed and extended our previous knowledge, and their studies on the distribution and natural history of the several species of Anopheles, and other mosquitos met with there, were of great value.

They further made the most important discovery (made independently about the same time by Koch) that while the native adult in such regions is in great measure immune towards malaria, the disease is exceedingly prevalent among native children. They showed, indeed, that this was so much the case that in these regions the native is a prime agent in the infection of Europeans with malaria, and that the segregation of the white man from the native, and the avoidance of native huts, which are nests of infected Anopheles, form a potent means for the prevention of the disease. The importance of this discovery from a prophylactic point of view is of the first order.

After completing their researches on the West Coast of Africa at Lagos and Sierra Leone, Drs. Stephens and Christophers proceeded in 1901 to India, carrying out their researches first in Bengal and subsequently in the Punjaub.

They have carefully investigated in various districts the species of Anopheles carrying the malaria parasite and acting as agents of infection, a knowledge of which is the necessary antecedent to prophylactic measures.

They find, as in West Africa, though perhaps to a less extent, that the native children contain parasites in their blood and must, therefore, be regarded as sources of infection. They maintain, indeed, that in any district the percentage of native children infected with the parasite may be taken as the index of the prevalence of malaria in the district, or, as they term it, of malarial indemicity; and they have determined the connection of this index with the presence or nearness of the breeding places of the species of Anopheles serving as carriers of infection. This knowledge is of direct service from a prophylactic point of view.

They point out, however, that in certain cases abundance of a species capable, if themselves infected, of infecting man may exist with a very low malarial endemic index; this points to certain unknown factors in the spread of the disease, the discovery of which may be of great practical value.

Their study of the malaria at Mian Mir led them to begin an interesting experiment on a method of exterminating the infecting Anopheles by treatment of the irrigation canals. This experiment, in order to be demonstrative, needed to be carried on for a considerable time, and, since the departure of Drs. Stephens and Christophers, has been carried on by Captain James.

At the outset the Commission was instructed to study, not only ordinary malaria in its various forms, but also and especially the disease known as "blackwater fever," the relations of which to malaria had been a matter of dispute, some observers maintaining that it was a form of malaria, others that it has no necessary connection with that disease, or is at any rate due to a special strain of parasite.

Drs. Stephens and Christophers began their study of blackwater fever in British Central Africa and continued to investigate it in the West Coast of Africa and in India. Their observations have led them to the conclusion that the disease is essentially of malarial origin, and not due to a different parasite. Though with the onset of an attack the malarial organisms disappear from the blood, they leave distinctive traces of themselves in certain features of the blood corpuscles; and the occurrence of blackwater fever is coincident with high malarial endemicity, *i.e.*, with the large occurrence of the malarial parasite in the blood of native children.

Hence—and this is a matter of considerable importance—the prophylaxis of blackwater fever is in the main identical with that of malaria, that is, the prevention of malarial infection by mosquito bite or, if the infection has taken place, the adoption of remedial measures, including the adequate and proper use of quinine; with respect to the latter, it should be added that an attack of the disease may be brought on by the injudicious use of quinine when the patient is in a condition of malarial cachexia. It may be hoped that with the adoption of general measures against malaria and care in the use of quinine this dreaded scourge may be largely done away with.

I venture to hope, Sir, that His Majesty's Government and the Colonies will feel able to share the opinion of the Royal Society that the money and labour which have been spent on this inquiry have been well repaid. The investigations of the Commission have undoubtedly contributed largely to that remarkable increase of our knowledge of the nature and causes of malaria which has been gained during the past few years—a knowledge which promises, if not to exterminate, at least so to diminish the occurrence of that disease as to permit the white man to live in health, strength, and comfort in regions which previously had been dreaded, and justly dreaded, as places of almost certain sickness and of not improbable death.

I may add that malaria is not the only disease which offers obstacles to the prosperity of the Empire in tropical countries. There are other diseases affecting men, and also diseases affecting animals such as cattle in these tropical and sub-tropical countries, the occurrence of which forms an obstacle, and at times brings disaster to Colonial enterprise. May I suggest that the plan of operations which has been so fruitful in respect to malaria might with advantage be repeated in view of other maladies of man and animals, and that a permanent organization for the study of the nature and causes of these maladies, a knowledge of which can alone form a sound basis of operations for prevention, might fairly be expected to furnish an adequate return for money spent upon it.

Thanks to the institution of Schools of Tropical Medicine in London and in Liverpool, and to the increased interest in these diseases which has developed throughout the country, it will not be difficult to find young men of talent adequately trained for the investigation of these diseases, and prepared, by their love of science and inquiry, to undergo such hardships, or to face such dangers, as may accompany these investigations.

I have, &c.,

M. FOSTER,
Secretary, Royal Society.

Sub-enclosure in Enclosure No. 2.

SUMMARY OF RESEARCHES ON NATIVE MALARIA AND MALARIAL PROPHYLAXIS; ON BLACKWATER FEVER: ITS NATURE AND PROPHYLAXIS.

By J. W. W. Stephens, M.D. Cantab, D.P.H., Lecturer in Tropical Medicine, Liverpool, and S. R. Christophers, M.B., Vict., I.M.S.

I.

OF our researches on malaria, those relating to native malaria seem to us of such great practical importance that in the present report we have almost entirely confined ourselves to a discussion of these, and their application to the prevention of malaria among Europeans in the tropics.

It is unnecessary here to discuss the question of the mosquito transmission of malaria. We may, however, lay stress on some points which are as yet often overlooked:—

(1) It is practically certain that the mosquito cycle is the only one. We cannot, in the space at our disposal, give all the reasons for this statement; suffice it to say that up to the present no competent observer has brought forward a single fact inexplicable by mosquito transmission or suggesting any other channel of infection.

(2) Regarding other hosts of the malarial parasite than man, no one has found any other animal than man infected with the organism of human malaria. The supposition that monkeys may be the means of infecting Anopheles in the jungle is made highly improbable by Koch's researches. We may point out, too, that such a supposition is in no way needed to explain malaria contracted in the jungle, the real mode of infection in such conditions being now quite well understood.

(3) All recent research confirms the view that malaria is always derived from malaria pre-existing in others. It is as important to recognize that *malaria is only derived from man* as it is to appreciate that it is only transmitted by the mosquito (Anopheles). In other words, malaria is as much an infectious disease as scarlet fever, the only difference being that it is not conveyed by contact, but only by the Anopheles mosquito.

Malaria then is an infectious disease—the infection or malaria parasite being conveyed from one person to another by the bite of Anopheles. An Anopheles mosquito, *per se*, is harmless; it is only an Anopheles containing parasites, or in other words an infected Anopheles, that can transmit malaria, and the only way by which an Anopheles can become infected is by "biting" some person who has the parasite in his or her blood.

It at first site seems strange that the infective character of malaria has been and is still so overlooked by the general public. The actual mode of infection, however, has lately been made clear. Malaria is not in the tropics usually contracted from "fever" cases, but almost always from "latent" malaria in the native population.

Native Malaria.

1. Koch, in the East Indies, almost everywhere found malaria in the children, though adults were free from infection. He commonly found malarial infection only on microscopical examination of the blood. In some of the villages examined by him every child had malaria, in others a smaller proportion. He came to the conclusion that the degree of infection he found in these children was a test of the intensity of malaria.

2. We ourselves, finding that Anopheles caught in native villages always contained a considerable percentage of infected specimens, were led to the discovery that this was dependent upon a general infection of the native children of Africa, who, although apparently in good health, had almost always the malarial parasite in their blood. We were thus able to show that the home of malaria is in native huts, hamlets, villages, and towns, and that European malaria is a mere resulting sign of the vast degree of indigenous latent malaria.

This has been amply confirmed subsequently by other observers, notably by Annett and Dutton in Nigeria, Ziemann in the Cameroons, and again by ourselves in India.

The Infection of Anopheles.

Where human infection is so general we should expect also to find Anopheles infected, and, indeed, in any batch of Anopheles caught in native huts a greater or less proportion always contain sporozoits, *i.e.*, the malarial parasite in a condition ready for infecting man, The number of Anopheles infected is a variable one. As a rule in Africa it is from 5 per cent. to 10 per cent., but reached in some villages 50 per cent. Aro, on the Lagos railway, was an instance whether the sporozoit rate in Anopheles caught in native huts was 50 per cent. Obviously it would be as difficult to avoid malaria in such a place as smallpox in a smallpox hospital.

We have said before that Anopheles are only capable of giving rise to malaria when they have previously fed upon blood containing malarial parasites, but a curious fact, and one of great importance, may be here noted. Anopheles are mainly to be found in association with native dwellings. One has not long to do with Anopheles without finding that they are hardly ever really abundant, except in native communities. Whenever in any place we wished to collect large numbers, our invariable practice was to proceed to the native quarter, and there we could collect Anopheles generally without difficulty. It was otherwise elsewhere, and in remote marshes occasional specimens (most frequently of a "wild" species) only were caught in our tents. So far as appears at present, the majority of Anopheles in Africa haunt native villages. It is, perhaps, almost permissible to say that about 5 per cent. of all the Anopheles of Tropical Africa are infected with malaria and infected solely because they have derived the infection from latent native malaria.

In nearly every hut, then, of the millions scattered over the jungle lands of Africa, and of those forming the densely crowded towns of West Africa, we have children with parasites in their blood, and Anopheles to disseminate these.

The consequent Infection of Europeans.

The condition of extreme unhealthiness found *par excellence* in West Africe is not determined by the "climate." The reason is largely to be found in the conditions under which Europeans at present live in Africa. Even on general grounds it would be well to avoid native huts and hovels, with all their dirt and insanitary surroundings, conditions which may be likened to those in the worst slums of our large towns. When, however, we realize that these huts are veritable hotbeds of malaria, it is evident that the very first sanitary law for Europeans in Africa is to avoid their neighbourhood. It is, however, a striking, but most deplorable, feature that in Africa hardly ever do we find a European bungalow or dwelling-place built with this end in view. European houses are often situated among the huts of the natives in towns, as in Freetown, Sierra Leone, or they have a cluster of hovels or huts close at hand. In one instance we saw a new settlement being built on the very fringe of a native village. It was not a question of necessity, as land free from villages or huts was available all round, nor was there any reason of policy, the Europeans being employed on the railway and having no relation with the villagers. The choice of such a site, sufficient in itself to ensure the settlement being a very deadly one, as it indeed was later the case, could only be deplored. To sum up, then, we can say that with certain notable exceptions, to be mentioned later, the European on the West Coast of Africa is living in the midst of native huts and is consequently daily exposed to the bites of infected Anopheles. The actual conditions are described in greater detail in the following section dealing with prophylaxis.

Prophylaxis.

At the outset we shall divide the prophylaxis of malaria under two heads :—

(1) The prevention of malaria in native communities.

(2) The prevention of malaria in Europeans.

The two problems are essentially different, and no confusion should ever exist in our minds as to what any given anti-malarial measures are intended to achieve, whether increased health of resident Europeans or diminution of native malaria.

(1) *The Prevention of Malaria in Native Communities.*

Prophylactic measures applicable to the average native of Tropical Africa are, for many years to come, beyond discussion. The vast bulk of African natives are completely beyond any sanitary control whatever. In some large towns a measure of control does exist, *e.g.*, Freetown, Lagos, Accra, Cape Coast Castle, and a few others. In these only has one the least hope of achieving any result.

Methods of malarial prevention applicable to large native communities seem confined to some form of Anopheles destruction, either by superficial drainage or by the continuous labours of a mosquito brigade. The administration of quinine, advocated by Koch, though so effective under the conditions at Stephansort, could not, we feel certain, be applied with any measure of success even in Freetown or Lagos. Speaking briefly, we, ourselves, do not believe that with the means at the disposal of the sanitary bodies in West Africa any appreciable diminution in native malaria can at present be brought about. The destruction of Anopheles larvæ was, at first sight, so effective a means of getting rid of malaria that schemes for extensive destruction had many advocates. In our own experience the outlook has become less hopeful the more the habits of Anopheles have become known, and our opinion of the practicability of such operations has become gradually subverted by the practical experience of the difficulty of undertaking effective measures on a large scale. If drainage can be efficiently carried out over a particular area, it would, we believe, be successful in diminishing native malaria, but the conditions surrounding each case must determine to what extent such measures can be applied.

(2) *The Prevention of Malaria in Europeans.*

In 1900, working on the Gold Coast, we advocated the protection of Europeans in Africa as being at present the proper and legitimate object of our limited resources in Africa. We gave reasons for believing that a system of segregation from the native, carried out as opportunity offered, would be far more effective than any other prophylactic measure within our power. We have already seen that the malarial fever to which the European is subject is due to the fact that he lives amidst the natives, or with the native at his door. We would emphasize again the fact that these conditions have impressed themselves upon us so vividly, because our experience of them has not been that of a passing observation, but one derived from actually living under them. We have enjoyed the hospitality of very many Europeans, and have slept in the bungalows and quarters of officials, railway engineers, missionaries, settlers, traders, in quarters in the centre of native camps, always with the inevitable native huts in the compound, and in all these conditions held good. Realizing the danger of sleeping under such conditions, we succeeded in preserving our health only by most constant and unremitting care in the use of personal precautions. Such precautions we, however, found were generally so irksome that men preferred to run the risk of infection rather than bestow the necessary attention to them. Although we used mosquito nets we found it necessary to employ an extraordinary and troublesome degree of care in their use in such conditions as are usual in African up-country stations, and we believe but few men would employ them with sufficient care to avoid infection in such places. Similarly with regard to houses protected with wire gauze. Even where the oppressiveness of the climate would not preclude their use, we consider that it is only by a constant vigilance that but few men would exercise that such measures could be successful.

As a preliminary step to all other prophylactic measures, and as one likely more than any other to minimize European malaria, we, therefore, advocate "segregation from the native."

Since we first put forward segregation as a principle to be followed whenever opportunity offered, it has been recognized by some authorities* as the first law of hygiene in the tropics; on the other hand, it has met with criticism. Much of the latter is evidently based on mistaken notions of what is meant by segregation and what segregation entails. Segregation as an anti-malarial measure does not, for instance, mean the avoidance of intercourse with the native. Nor does it mean a lessening of the power of control of the native. It has been said that segregation means giving up a country. Such a notion could only arise from a complete misconception of what is meant by segregation in this connection. The fact that in India segregation is almost universal seems to us to effectively meet such objections. In India we do not, except rarely, find European dwellings and native quarters crowded together, but almost always a well-designed European quarter, quite distinct from the native bazaar. Yet in India there can be no question of loss of touch with the natives—rather on the contrary, an increased respect on their part.

To talk also of the impossibility or impracticability of segregation in Africa is absurd, because a most excellently carried out scheme of segregation already exists at Accra (Victoriaborg), and to a less extent at Old Calabar, both which places are noted on the West Coast for their comparative healthiness. Moreover, since we first advocated such measures they have been advocated also by Annett and Dutton (2nd Liverpool Expedition) as applicable, above any others, to Nigeria. These authors had actual experience, during many months, of the condition under which the European lives, and they advocate segregation as strongly as we do ourselves.

Further, Logan Taylor, himself engaged in destructive measures against mosquitoes, says :† "When suitable ground can be had I think it better for the European to live away from the native town. In Accra the Government officials have good bungalows away from the native town, forming a proper European quarter (Victoriaborg), and this arrangement is found to work well, and Accra is the healthiest town on the Gold Coast."‡

---

* Note.—Manson. Practitioner, 1900. Annett and Dutton, 2nd Expedition, Liverpool School.

† Note.—Second Progress Report of the Campaign against Mosquitoes in Sierra Leone. Liverpool University Press.

‡ Note.—That segregation is a practical measure there is increasing evidence to show. Thus at Akkassa (Nigeria) "a hotbed of fever and disease," segregation has been effected (together with drainage and the regular administration of quinine to Europeans), and Akassa is now one of the healthiest stations in West Africa. (Brit. Med. Jour., April 18, 1903, p. 924.) Further segregation schemes have been carried out at Secondee and Cape Coast Castle.

Practical Application of Segregation to Various Conditions of Life in Tropical Africa.

Since we feel very strongly that the segregation of Europeans is the first step in the prophylaxis of malaria in Africa and other tropical regions, we think it desirable to show how in practically every condition of life this principle can be applied.

So far prophylaxis (destructive measures) has been directed entirely against the malaria of large towns. If even, however, we could make the large towns of West Africa healthy we should still have an enormous fever- and death-rate among Europeans on the Coast, quite half of whom live in outstations, and the great majority of whom make very frequent tours. Moreover, it is in *outstations* that Europeans are chiefly in need of protection. Whereas we found that residents in towns enjoyed, on the whole, fair health, it was in outstations that we chiefly found men in the fever-stricken and miserable condition so characteristic of Tropical Africa. We would point out then that something more than anti-malarial measures in large towns is needed if much improvement in the health of Europeans is to result.

It is here that "segregation" holds out such prospects of success. Not only is the formation of a European quarter in large towns a fundamental law of health, but, as we shall show, in outstations, railway camps, mission stations, in bungalows in tea or coffee gardens, in expeditions, military or otherwise, in ordinary travelling, segregation is equally applicable.

Before malaria is made to decrease among Europeans in Africa it must be generally recognized that malaria is an infectious disease, and that it is present in practically every native hut. When this is the case men will refuse to allow in their compounds squalid grass and palm-leaf huts; they will cease to build their bungalows among or on the outskirts of villages; they will be extremely careful where they sleep when travelling, and it will be the duty of the medical officers of mining camps, railways, and military expeditions to absolutely forbid the forming of any camps near native huts, or to allow these to spring up in the more permanent camps.

(1) *Segregation in large Towns.*

We have two noteworthy instances where in large towns segregation has been carried out most effectively, with the result that the two segregated communities, Accra (Victoriaborg) and old Calabar, are notoriously the most healthy on the coast.

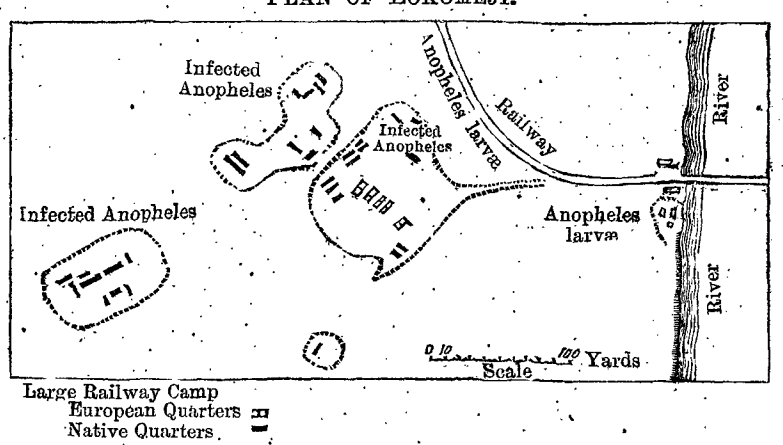
Moreover, in any large town where such complete segregation on a large scale is not immediately applicable the principle should be borne in mind, and as opportunity offers huts should be removed and European houses built in the open: Thus, at Lagos, a well-designed quarter could, we feel sure, be gradually formed, and would place Lagos in the same category as Accra. At Freetown we believe arrangements are now being made to remove the official quarters to a segregated site on the hills,* and at Cape Coast Castle also a site for officials has been chosen well removed from the native town. The plan then followed in towns is the formation of a European quarter as distant as possible from native huts, and no better examples of this can be found than the arrangements in India of a European cantonment and native bazaar.

(2) *Segregation in Outstations.*

The terrible sickness and mortality resulting from the practice of the European living amidst native huts was nowhere more forcibly brought to our notice than in the camps of engineers and other employés engaged on railways under construction. Every settlement and every camp showed the same most deadly practice of allowing numerous native huts to be erected actually in the compound in which dwelt camp followers and their numerous families (children). To this fact alone is due the excessive sickness from malaria, and as a consequence also blackwater fever, on railways under contruction. The working in swamps and the turning up of soil are in no way responsible, and a single instance will suffice to show to what railway engineers owe the malaria they so markedly suffer from, for never did we succeed in finding an exception to this deadly arrangement of native huts (with their constant fever supply) and European dwellings close at hand.

The Lokomeji Camp on the Lagos railway (see plan) :—

Plan of Lokomeji.



About half a dozen Europeans lived in this enclosure. In it there were no less than 13 native huts, with, at a guess, 100 inhabitants, men, women, and children.

This is more than enough to explain the constant sickness among Europeans here, but in addition there is a second crowded native compound, and a third within one hundred yards. When we consider that every one of these huts is a source of malaria (for actually one-half of the Anopheles

* Note.—Proposed site for European Residences in the Sierra Leone Hills. Stephens and Christophers. Fifth Report to Malaria Committee, Royal Society.

caught by us contained parasites in the stage ready for transmission to man), it becomes at once evident that a most unfortunate and disastrous mistake has been made by the Europeans living here. In such a case as this the engineer in charge of the section has the power of selecting a site, and has absolute power to forbid the building of any huts within any distance he chooses. When the European fully understands the certain danger to his health in living under such conditions he will absolutely refuse to submit to such unnecessary exposure to danger. With ease on a railway, a well segregated site for Europeans can always be provided. We shall see that a quarter to half a mile is ample, and some protection is ensured often by only a few hundred yards.

We have given a railway camp as an example of the evil effects of living amidst native huts because here, perhaps, most markedly did we see the result in the fever-stricken, anæmic Europeans subject more than any to blackwater fever. The condition of life is, however, equally typical of *all outstations*; the planter, missionary, trader, and even Government officials live universally under similar, though usually less deadly, conditions. In many such outstations the condition could be remedied by very slight changes, the removal of a few hovels: often a single grass hut has been the source of perpetual fever among the Europeans living in a house.

We do not say that no native servant should sleep in a compound (though personally we found no inconvenience in allowing our servants to sleep away), for it is not in the presence of one or two adult servants that the danger lies, but in the numerous families (with children) crowded into dark and dirty huts so universally seen at the European's door. Once the fact is recognized that it is from the crowded cooly lines and native quarters that the European derives his fever, we feel sure that the whole hygienic aspect of these fever camps will change.

Segregation on Military and other Expeditions and for Travellers and Sportsmen.

The facts already put forward explain also why military expeditions in Africa are attended with such a large amount of sickness and so terrible a mortality. As an example of the mode of contracting malaria on military expeditions we may instance Prahsu, a well-known halting-place on the way to Kumasi from the coast. It is probable that every man passing up or down to the coast during the Ashanti campaigns slept at least a night at this station. From plans of the condition there, European quarters and native huts in close proximity, it is at once evident that there at least was one of the sources of the sickness and mortality among European troops, and not in the "climate."

In native villages the native porters are able to procure food, and here generally clearing is found ready for a camp. So that it is the almost invariable practice of travellers of all kinds to camp in the village clearing, often to sleep in the native huts.

Here, again, we find the inevitable result. Although the traveller may not pay much attention to their bites, the Anopheles from the huts have injected malaria parasites (sporozoits) into his blood, and ten days later he is "down with fever."

Here, briefly, though it is a most important practical point, we must consider the question of flight of Anopheles. As the result of very numerous observations and experiments both in Africa and India we may emphatically state that Anopheles do not often fly a quarter of a mile, and practically never half a mile. We are considering, it must be understood, the habitual, not the possible maximum flight. Anopheles, in fact, tend to leave but for a short distance the thatched huts in which they spend the day, and although we give a quarter of a mile as a maximum flight, yet a segregation of 100 yards from a native hut is infinitely better than none at all. Also, every natural obstacle tends to aid segregation, and should be taken advantage of, as the ridge of a hill, a belt of trees, bananas, bamboos, &c., and though a well isolated dwelling, with no native families within a quarter or half a mile, should be aimed at, yet when native huts exist which it is impossible to remove, they should be as completely screened as possible by the planting of bananas, &c.

To sum up these various conditions, we may say that a European who pitches his camp or builds his permanent quarters half a mile, to take an extreme limit, from any collection of native huts, however small, will avoid infection otherwise almost inevitable, and if in his compound he allows only those servants absolutely necessary, he is in a position to escape the dangers of life in Tropical Africa.

Personal Precautions.

We cannot emphasize finally too strongly the need at present for these. We, ourselves, by unremitting care, completely escaped contracting malaria during over three years' residence in Africa and India; in places, too, where, more frequently than not, the deadly conditions we have described existed. Among these precautions we place the proper use of a mosquito net as by far and away the greatest means of individual protection.

1. *Mosquito Net.*—The net should be square (not a bell net), should not have a single, even minute, hole, should hang inside the poles, if these are used, should be tucked in *under* the mattress, and should *not* trail on the ground. A piece of closely woven material, fastened on all round at the level of the body, is a necessary addition, in order to protect the limbs during sleep from bites *through* the net. When not in use the ends of the net should be twisted up somewhat, and then thrown over the top. We always arranged our nets ourselves, never trusting to servants, and further, to be doubly certain, we always carefully searched the interior with a candle before going to sleep. To these minute precautions, solely, we attribute our absolute freedom from malaria. Employed without care and attention, a mosquito net is little protection in such malarious places as most up-country African stations.

2. *Subsidiary Measures.*—In many of the more malarious places we visited we considered that other subsidiary precautions, such as will suggest themselves to any intelligent person, were also necessary. To protect our legs and ankles, for instance, we considered it necessary to wear thick trousers, with putties, or the very convenient so-called mosquito boots. The face and hands are not in waking hours very likely to be bitten by Anopheles, though they are very likely to be bitten by various species of culex. It must be understood, however, that for precautions to be effective in badly malarious places considerable care and thoughtfulness is entailed, and few followed our example.

3. *Quinine.*—During the whole of our three years' life in the tropics we found it quite unnecessary to use quinine. If, however, the bites of Anopheles cannot be guarded against, quinine should be taken as a prophylactic. We consider Professor Koch's method of taking 15 grains on two successive days in each week as the best. Repeated small doses are of doubtful efficacy.

II.

Blackwater Fever.

Considering the fatality of this disease and the fear it inspires in the European in Africa, we fully realized the importance of trying to solve the vexed question of its cause.

We believe that facts observed by us based on direct microscopical evidence have placed on an absolutely satisfactory footing its malarial nature. The importance of this has a great added value because it follows that the prophylaxis is identical with that of malaria, and the European who can protect himself from attacks of malaria will have no fear of contracting blackwater fever.

It has been held by the majority of competent observers in recent years in the tropics, notably A. and F. Plehn and Ziemann, that blackwater fever was malarial in nature. The most important objection to this view is that a microscopical examination of the blood in blackwater cases is generally negative, *i.e.*, shows no malarial parasites, or so few as to make it doubtful if they could be associated with the attack. This then was practically the state of our knowledge when we commenced our work on this fever.

In our investigations into the ordinary forms of malaria, however, in the tropics we soon recognized that in severe malaria also an examination of the blood might, in certain cases, reveal no parasites, or in other cases very few, quite insufficient apparently, to account for the severe symptoms. Such cases were those in which quinine had previously been taken, so that it was not an uncommon experience for a blood examination to show, before the taking of quinine, numerous parasites, whereas later, while still high fever and severe symptoms continued, parasites might be entirely absent. Nor was it exclusively in cases where quinine had previously been taken that parasites were absent. In certain cases, though we believe these are comparatively rare, parasites may be absent, or, if present, are so few in number that they bear no proportion to the severity of the attack. And, indeed, our experience has been confirmed by others working both in the tropics and in Europe—by Celli, Ziemann, Schaudin.* Thus the last-named says, in case I. parasites were present during the attack and during the intervals of the fever, but in case II. they were almost always absent on the day after the attack, and during the attack they were very scanty, although the fever was extraordinarily severe.

We were led then, in such cases as these, to seek for other proofs of the malarial origin of the fever. Two such methods were adopted by us: the first consisted in a thorough search in extensive blood films for pigmented leucocytes, which are evidence of a recent attack of malaria. The second was by a determination of the relative proportion of the different varieties of leucocytes in the blood. We followed out this line of observation at length, and found that in malaria a relative increase of the large mononuclear leucocytes took place, and were led to consider a value as high as 20 per cent. as evidence of an antecedent malarial attack. Similar observations had also led Turk, whose work was then unknown to us, to point out the diagnostic value of this increase in the diagnosis of malaria. We have, then, two auxiliary methods in the diagnosis of malaria:—

(1) The detection of pigmented leucocytes.
(2) The increase in the percentage of the large mononuclear leucocytes.

Applying these subsidiary tests to blackwater fever in which parasites are, as a rule, absent, we were able to show that nearly all of these cases, apparently non-malarial, are, in fact, malarial, presenting pigmented leucocytes and an increase in the large mononuclear leucocytes. In our first series of 16 cases, although only in 3 were parasites found (about 19 per cent.), yet using these subsidiary tests no less than 93·7 per cent. were shown to be malarial.

We thus, as the result of our work, established on a microscopical basis the proof of what had been previously mainly conjecture.

Blackwater fever, then, is malarial in origin. It cannot, however, be considered as simply a severe form of malarial fever, for there is yet another side to the question.

In 1860 Tomaselli first published a series of cases in which symptoms of blackwater fever followed upon the administration of quinine, not necessarily in large doses, but almost invariably in those who had suffered much from malaria.

A. Plehn and F. Plehn, in the Cameroons, have published most accurate histories of very many cases of blackwater, and with very rare exceptions they always followed upon the administration of quinine.

Koch has so strongly advocated the quinine factor in blackwater that it appeared at first as if he denied its malarial origin, but this is not so, as is quite clear from his later writings. He holds that quinine is the immediate exciting cause, but that a predisposition, determined by many attacks of malaria, is necessary.

Many of those who hesitated to give their assent to these views now acknowledge that there is such a thing as quinine hæmoglobinuria occurring in malaria cases. This acknowledgment amounts to a recognition of the quinine origin of blackwater fever, for the two conditions are absolutely indistinguishable. We have ourselves seen cases which were to us clearly of this nature, and our views are summed up by saying that blackwater fever is a disease malarial in origin, and dependent on blood changes occurring after many malarial attacks, and generally, if not always, in relation to an actual attack, but that also it is undoubtedly almost invariably induced by the taking of quinine in this state.

It has been argued that if quinine is the cause of blackwater fever it is a dangerous drug, and should not be used in malaria, but this argument is not a good one. It is, as we believe, in the malarial chronic that blackwater almost always occurs. We believe that in such a person quinine is dangerous. If, however, quinine is efficiently used as a preventive of malaria, no fear need be held of it. It is inadequate quinine treatment, because malaria is thereby not really combated, which is the danger.

* Arbeiten, a. d. k. Gesundheitsamte, s. 234, Bd. XIX.

While, then, we consider that the malarial origin of blackwater fever has been established by us on a basis of microscopical evidence, yet we may briefly consider some other aspects of the question, as it will enable us also to answer some of the objections of a purely general character, which have hitherto been raised against its malarial origin.

1. It has been urged that the distribution of blackwater fever and malaria is not the same. Even if this statement were true, it must not be forgotten that the distribution of mild malaria and severe malaria is by no means the same. Thus, the mortality from malaria in the few still remaining foci in Northern Europe is in no way comparable to that of the Roman Campagna, nor, again, is the severity of malaria in Northern Italy comparable with that in the South. We cannot, indeed, speak of the distribution of malaria as a whole. If, however, we confine our remarks to regions of intense malaria we believe that the distribution of blackwater fever will be found to tally exceedingly closely with that of malaria. The distribution of blackwater fever is, we believe, considerably wider than is generally supposed. Thus in the Bengal Duars, in India, blackwater was found by us to be as common as in Africa, a fact to which the literature of the distribution of blackwater fever gave us no clue.

Further, in Madras we discovered the existence of blackwater fever, the existence of which was quite unknown, even to medical men in India. We believe, in fact, that there is rather a very close and even exact parallel between the distribution of blackwater fever and severe malaria.

2. An accurate history of blackwater fever cases will always reveal that the patient has suffered more or less constantly from previous attacks of fever, and that for a day or two previous to his attack he has had a more or less markedly high temperature. That this temperature is of malarial origin is shown by microscopical evidence, for—

3. If the blood of a patient about to suffer from blackwater fever is examined by chance before the onset of the disease, and before the taking of quinine, it is almost invariably the case that malarial parasites are easily found. An examination of the same case after the onset of the blackwater is, however, most frequently negative as regards parasites. Thus Panse, in a recent paper (Zeitschrift für Hygiene, s. i. 1903), found parasites without exception in all those cases which he was able to examine immediately before the onset of the hæmoglobinuria; and arrives at exactly the same conclusion as ourselves as to the direct dependence of blackwater on malarial infection.

4. That blackwatter fever affects residents mainly in their second and third year suggests that it occurs in conditions of chronic malarial infection, and is strongly against a view which has been suggested that blackwater fever is due to a special parasite. Thus Berenger-Féraud* gives the following data: first year 5·4 per cent., second year 22·5 per cent., third year 42·5 per cent., fourth year 20 per cent., fifth year 4·8 per cent.

5. Again, the fact that in West Africa and other regions where blackwater fever occurs Europeans die not so much of malaria but of blackwater fever, seems to admit only of one conclusion. To give more exact figures, it appears that in the German Colonial possessions out of 3,000 cases of malaria there were 8 deaths only from ordinary malaria, but 62 from blackwater fever. However we consider these general points, they all clearly point to the malarial origin of blackwater fever, though, as we have said, the real evidence depends upon the microscopical evidence of malaria in blackwater.

Blackwater fever, then, is malarial in its nature, and its prophylaxis is consequently identical with that of malaria.

J. W. W. STEPHENS, M.D., Cantab.
February 4, 1903. S. R. CHRISTOPHERS, M.B., Vict., I.M.S.

Enclosure No. 3.

THE SECRETARY TO THE ROYAL SOCIETY TO COLONIAL OFFICE.

(Received May 4, 1903.)

The Royal Society, Burlington House,
London, W., May 2, 1903.

SIR,—THE valuable results of the efforts made under your initiative towards the prevention of malaria in the Colonies encourages me to lay before you the following considerations.

In many parts of the Empire, especially in tropical and sub-tropical countries, the development of Imperial interests is often most seriously impeded or even imperilled by the occurrence of diseases. Some of these, like malaria, yellow fever, sleeping sickness, beri-beri, and many others attack man himself. Others, such as horse sickness, rinderpest, redwater, tzetze fly disease, and many others attack the domestic animals which man uses.

These diseases, for the most part, do not exist in the British Isles, or are not seen there in the form in which they occur in foreign parts. Hence the knowledge needed to combat them with success must be gained by studies carried on in the foreign regions in which they occur.

Further, these diseases, as experience has shown, present problems of extreme complexity and difficulty, problems which lie beyond the powers of investigation possessed by the ordinary medical practitioner, and, indeed, call for the exercise of the very highest talents and the use of the very best appliances of modern inquiry. To combat successfully any one of these diseases it is not enough to offer assistance to the local medical officer on duty at the spot where the outbreak of disease is taking place, or even to send out such promising young men as may be induced by a small honorarium to undertake the inquiry. Success in the solution of such difficult problems cannot reasonably be expected unless one is prepared to meet such an expenditure as will secure the services of investigators of acknowledged experience and ability, and will provide these with all the means of inquiry which they need; such larger expenditure is the only one which is truly economical.

* "La Fièvre Bilieuse Melanurique."

Influenced by the above considerations, seeing that these diseases affect the welfare not of the Colonies alone, but of parts of the Empire not under your care, not only of the residents in the foreign places where these diseases may rage, but also of the Army and Navy, which may occasionally visit these places—seeing that the matter is one essentially of Imperial importance—I would venture to suggest, for your consideration, the question whether the organization which you have carried out with such valuble results might not, to the great benefit of the Empire, be expanded into some larger scheme.

It would be out of place for me to enter into any details now. I will content myself with saying that the scheme which I have in my mind, put broadly, comprises the following points :—

(1) The formation of a fund large enough to cover estimated expenditure, the fund being of an Imperial character, shared by more than one Department, and contributed to by various parts of the Empire.

(2) The administration of this fund by an authorized body.

(3) The expenditure of this fund partly and chiefly in inquiries conducted in the localities where the diseases occur, by special investigators sent out for the purpose or otherwise, but also in part in the maintenance of an establishment at home in which inquiries begun in the fields of the diseases could be more conveniently and effectively completed. It might be desirable to have similar establishments in other places besides England.

I have, &c.,

M. FOSTER,
Secretary, Royal Society.

The Right Honourable J. CHAMBERLAIN.

IX.—1904.

REVIEW OF THE TRADE IN CEYLON FOR THE YEAR 1903.

Ordered by His Excellency the Governor to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 10 cents.

1904.

REVIEW OF THE TRADE IN CEYLON

FOR THE YEAR 1903.

GENERAL SUMMARY.

THERE was a satisfactory progress in the trade of the Colony during the past year. The Customs revenue exceeded eight million rupees, mainly owing to increased importations of grain, spirits and cordials, sugar, and other goods.

The exports of the products of the cocoanut palm largely exceeded that of 1902, the high price ruling for copra inducing the shipments of that product on a very large scale indeed. Green teas have made good progress. The prices of teas generally rose by three cents a pound, and consequently, though there was a reduction of a little over 1½ million pounds in the quantity exported, their total value was nearly 4 million rupees more than that of the preceding year. It is said that the quality of tea during 1903 has on the whole been about up to the average, there being a lesser quantity of the very lowest grades, and a not too plentiful manufacture of the finest kinds. Exchange was steady throughout the year, the highest rate being 1*s.* $4\frac{5}{32}$*d.* (demand) and the lowest 1*s.* $4\frac{1}{32}$*d.*, or a difference of $\frac{1}{8}$. Money was plentiful locally, especially during the first six months, at which time the rate was as low as 3 per cent.

The actual value of the trade for the last five years, excluding specie, was :—

Year.	Rs.	Year.	Rs.
1899	213,007,870	1902	208,614,933
1900	220,550,716	1903	215,798,815
1901	204,232,206		

The value of imports reached its highest point in 1900, and exports in 1903.

Imports of Merchandise.

In the average of quinquennial periods the value of imported merchandise is as follows :—

Year.	Rs.
1889–1893	59,683,000
1894–1898	79,112,000
1899–1903	104,059,000

The value of imports under each of the headings under which articles are grouped was :—

	1902. Rs.	1903. Rs.
Animals, Living	1,442,373 ...	1,286,251
Articles of Food and Drink	50,755,749 ...	53,228,888
Narcotics	805,024 ...	857,992
Raw Materials (Textile)	217,722 ...	247,355
Do. (Metal)	702,319 ...	966,134
Do. (Other)	11,992,194 ...	11,267,100
Manufactures (Textile)	8,320,639 ...	8,052,432
Do. (Metal)	3,357,693 ...	3,212,885
Do. (Other)	20,280,475 ...	21,769,350
Bullion, Coin, and Precious Stones ...	11,588,087 ...	15,375,453

An appreciable increase is shown under the headings Articles of Food and Drink, Manufactures (Other), and Bullion, Coin, and Precious Stones. On the other hand, the falling off under the heads Animals, Living, Raw Materials (Other), Manufactures (Textile), and Manufactures (Metal) should not be regarded with apprehension, as they are very slight indeed.

In the following table the increase or decrease in values of the principal items as compared with 1902 is shown in lacs :—

Articles.	Increase. Lacs.	Decrease. Lacs.
Cotton Goods	— ...	$3\frac{3}{4}$
Metal and Metalware... ...	Nearly $1\frac{1}{4}$ ...	—
Cement (exclusive of Government Stores)	$\frac{1}{7}$ ...	—
Manure	Nearly $6\frac{1}{4}$ ...	—
Kerosine Oil	— ...	Nearly $2\frac{1}{2}$
Coal	— ...	Nearly $11\frac{1}{4}$
Live Stock	— ...	$1\frac{1}{2}$
Woollen Goods	Nearly $\frac{3}{4}$ ...	—
Spirits	Nearly $1\frac{1}{4}$ ...	—
Wine	$\frac{1}{4}$ ...	—
Narcotics	$\frac{1}{2}$ ...	—
Sugar	Nearly $\frac{1}{4}$ ...	—
Silk	Nearly $\frac{1}{2}$ ...	—
Grain	Nearly $30\frac{1}{4}$ ...	—

In the following paragraphs the most important variations in the principal items in each group are noted :—

Animals, living.—The decrease of 1½ lac is the result of a smaller importation of cattle, sheep, and goats. There was, however, no fall in the value of horses, though their number was smaller than in 1902.

Articles of Food and Drink.

Grain.—The figures for rice show an increase of 645,290 bushels compared with 1902, but there is a very slight falling off compared with the year 1900, which recorded the highest yet imported. The quantities cleared for home consumption during the last three years are as follows :—

Year.	Bushels.
1901	8,951,650
1902	8,873,871
1903	9,519,161

Three eighths of the entire Customs revenue was derived from grain alone during the year under review.

Fish.—The value for 1903 is 8¼ lacs lower than in 1902, due to smaller imports of Maldive fish. The following are the values for the past three years :—

Year.	Lacs.
1901	38
1902	38½
1903	30¼

Liquors.—The quantity of malt liquor entered for home consumption during the last three years was :—

Year.	In Bottle. Gallons.	In Wood. Gallons.
1901	119,000 ...	220,000
1902	89,798 ...	226,241
1903	98,379 ...	146,514

The present year's imports of bottled beer from United Kingdom and Germany were almost in equal quantities, while that of beer in cask, as in previous years, were supplied almost solely from the former country.

Wines show an increase of 967 gallons on the quantity cleared for home consumption. The figures for the last three years are as follows :—

Year.	Gallons.
1901	57,007
1902	57,971
1903	58,938

These figures may now be considered normal.

Spirits show a great tendency to increase year by year. The revenue derived from this source is now more than double that of 1895, due mainly to an increased consumption of gin and brandy. The following are the quantities cleared for home consumption during the last three years :—

Year.	Quantity. Gallons.
1901	176,615
1902	186,159
1903	203,196

Provisions.—Of miscellaneous provisions (flour, tinned provisions, biscuits, preserved meats, &c.) 49½ lacs worth were imported in 1903, as against 49 lacs in 1902, the increases are mainly under provisions unenumerated, wheat flour, and biscuits.

Curry Stuffs.—Nearly 16¾ lacs worth of this article was imported during 1903, as against 15¼ lacs in 1902. The increase in this trade cannot be regarded with satisfaction, as there seems plenty of room for local enterprise.

Spices to the value of one lac was imported in 1903, a decrease of ¼ lac below 1902. Pepper and ginger alone are, however, imported in appreciable quantities. The following are the figures for the last three years :—

		Rs.
1901	Ginger	47,297
	Pepper	59,724
1902	Ginger	50,241
	Pepper	63,199
1903	Ginger	50,396
	Pepper	47,071

Fruit, Fresh, imported during 1903 were valued at Rs. 54,583, as against Rs. 54,700 in 1902. This is nearly double the imports of 1900, and it is not likely, as previously stated, that the trade will now increase with any great activity.

Sugar.—Steady progress is being made in this trade. The figures for the last three years are as follows :—

Year.	Quantity Imported. Cwt.
1901	188,369
1902	218,074
1903	223,868

There is an increase under all heads, but more especially under candy and refined. Austria, Germany, China, and Hong Kong were the principal sources of supply for refined sugar, while the trade in palm and jaggery and unrefined sugar was almost solely with India.

Narcotics.

There was an increase in opium of 222 lb. as compared with 1902, and of 445 lb. as compared with 1901.

Tobacco, however, shows a decrease of 47,692 lb., but there was an increase of 31,600 lb. in cigars. The imports of the latter from United Kingdom more than doubled itself during the past year, the quantities being 28,959 lb. and 59,197 lb. for 1902 and 1903 respectively.

Oils.

Kerosine Oil.—The imports of this article show a decrease of 404,434 gallons below 1902, but there has been a falling off of only 30,282 gallons in the quantity cleared for home consumption. There was a slight increase in the consumption of American oil, but the trade in this is limited, preference being given to bulk oil, which comes from Russia in Asia owing to its cheapness. The figures for the last five years are as follows :—

Year.	Entered for Home Consumption. Gallons.	Year.	Entered for Home Consumption. Gallons.
1899	2,087,915	1902	2,867,818
1900	2,302,712	1903	2,837,536
1901	2,740,335		

Raw Materials.

Coal.—The imports of coal show a decrease compared with the last two years, the figures being :—

Year.	Tons.
1901	627,728
1902	532,159
1903	516,339

The imports from United Kingdom fell from 288,362 tons in 1902 to 246,507 tons in 1903, and that from India from 240,045 tons to 231,300 tons in 1903. Japan, however, supplied 26,370 tons during last year, as against less than a ton in 1902. The quantity imported into Colombo was 499,014 tons, against 507,897 tons in the previous year. The imports into Galle are being gradually reduced each year. This is not surprising, as several firms have given up trading in this article owing to the very small number of vessels which call at that port. Eight times the number of vessels that touched at Galle called at Colombo for coal during 1903, and though the imports into the latter port show a reduction during the last few years, there is every likelihood that it will grow larger as years go by.

Manufactured Articles.

Cotton Goods.—There has been a fall of 4 lacs in the value as compared with 1902, mainly due to a decrease in the imports of bleached piece goods from the United Kingdom. Lace and net and dyed piece goods are, however, responsible for an increase of over half a lac each. Of yarn and twist some Rs. 164,000 worth were imported, as against Rs. 174,000 in 1902. The decrease in duty on the quantity cleared amounts to Rs. 15,000.

Metals and Metalware.

There was an increase of nearly 1¼ lac over the imports of 1902. The imports for the present year are, however, nearly 17½ lacs lower than in 1900, which was the highest on record. The principal increases are in pig lead, galvanized iron, and hardware, whilst tea lead alone shows a considerable decrease. The increase in pig lead and decrease in tea lead are due to the establishment of a tea lead rolling mill in Colombo.

Manure shows an increase in quantity of 8,615 tons distributed under all the specified heads. The value for last year was Rs. 1,933,791, as against Rs. 1,316,563 in 1902. Castor seed poonac is imported in by far the largest quantity. Bone manure comes next. Nearly the whole of raw manure and much of the manufactured stuff, such as castor seed poonac, rape seed poonac, and groundnut manure is imported from British India, while for manufactured manure Germany and United Kingdom appear the principal sources of supply.

Specie.

The imports of specie were Rs. 3,785,260 in excess of the figures for 1902, silver showing an increase of Rs. 2,525,567 and gold an increase of Rs. 1,259,693. In 1903 silver was imported in quite a large quantity, thus making up the deficit of last year. An amount representing over two-thirds the entire imports of gold were exported during last year.

General Distribution of Import Trade.

The value of the imports of foreign merchandise in the last three years was thus distributed among the principal countries with which trade is carried on :—

Percentage of whole Trade.

	1901.	1902.	1903.
British India	51	50	53½
United Kingdom	29	27	25¼
Burma	4	4½	3¾
Australasia	nearly 2	nearly 1½	nearly 1½
India (excluding British)	1½	2¼	2¼
Austria	½	1	nearly 1
Maldive Islands	1¾	2	nearly 1½
Japan	nearly 1	1	1½
Straits Settlements	1	1¾	2
Russia	1½	1	¾
Germany	1¾	1½	2

From no other country did the imports amount to 1 per cent. in 1903.

The large proportion which India bears to the total is mainly due to the importation of grain.

EXPORTS.

The value of exports for the last five years, omitting specie, is as follows :—

Year.	Rs.	Year.	Rs.
1899	111,405,649	1902	110,731,670
1900	106,006,460	1903	113,520,963
1901	100,182,170		

Including specie, the exports for 1903 amounted to Rs. 120,057,575, distributed as follows :—

	Rs.
Ceylon Produce	100,871,556
Imports re-exported	1,356,167
Specie	6,536,612
Coal for steamer use	11,293,240
	120,057,575

The value of Ceylon produce exported during the last five years is given in the following table :—

Year.	Value. Rs.	Year.	Value. Rs.
1899	100,095,681	1902	96,771,467
1900	90,868,532	1903	100,871,556
1901	85,977,410		

The principal articles exported with their values for the last three years are as follows :—

Articles.	1901. Value in Rs.	1902. Value in Rs.	1903. Value in Rs.
Tea	47,610,950	54,298,694	58,198,622
Produce of the Cocoanut Palm ...	17,970,835	20,861,491	25,945,893
Cacao	2,321,331	2,537,764	2,248,145
Coffee	537,482	639,795	508,410
Plumbago	9,609,642	10,516,366	6,026,319
Cardamoms	694,874	821,027	907,419
Cinnamon	2,386,802	2,468,948	2,444,597
Citronella Oil	797,559	727,872	692,178
Timber	286,218	325,610	228,082
Tobacco unmanufactured ...	674,181	1,029,806	894,682
Cinchona	49,998	27,635	12,030

The striking features in the above are: first, the increase in the value of tea, due to a rise in the average price per pound; secondly, the increasing importance of the produce of the cocoanut palm, the value of which was 25·72 per cent. of the total value of Ceylon produce for 1903; and thirdly, the fall in the average value of plumbago, its exports, however, maintaining normal proportions.

Articles of Food and Drink.

Tea.—The figures for the last three years are as follows :—

Year.	lb.
1901	144,275,608
1902	150,829,707
1903	149,227,236

The quantity exported in 1903 is nearly the same as that exported in 1900; these last figures may now be considered normal.

The following statement shows the exports of green tea since 1901, when it first appeared separately in the returns :—

Year.	lb.
1901	1,250,490
1902	2,602,882
1903	8,236,768

The principal consumers are—

	1901.	1902.	1903.
United Kingdom	260,949	411,514	1,794,853
Canada	549,013	736,534	2,695,628
United States...	360,374	1,264,303	3,522,444
Russia in Asia	38,255	133,180	109,796
British India	17,443	27,760	10,461
Hong Kong	—	24,080	30,095
France	—	—	13,349
Russia in Europe	—	—	42,592

France and Russia in Europe appear for the first time among the places to which green tea is exported. The trade with United Kingdom, Canada, and United States has steadily increased, while British India and Russia show a fall below 1902. It will be interesting to note that United States took more of green than of black tea, during the past year, Canada also taking a quantity of green tea, not much less than that of black.

With regard to the general distribution of Ceylon tea, the following table gives the amount taken in millions of pounds :—

	1902.	1903.
United Kingdom	103·5	97·2
Australasia	18·8	19·5
Russia	11·4	10·1
United States...	3·7	6·9
Canada	4·9	6
China	4·5	5·2
India	·8	·4

There was a considerable falling off in the shipments to United Kingdom, partly due perhaps to an increase in the direct shipment of this article to its final destinations. The increase in the exports to United States and Canada is due to larger shipments of green tea, which continues to make increased headway in these countries.

With regard to the price the report of the Chamber of Commerce is as follows :—

> The prices realized for common teas have been good throughout the year. Fine teas have always been in demand and sold satisfactorily, and when scarce the more attractive sorts have benefited. The medium kinds have frequently been neglected, and shown good value to buyers. Fannings and dust have been taken in large quantities for "brick tea," and up to the last few weeks when the demand for this trade slackened, they commanded good prices.

The average price at the Colombo sales was 38 cents, against 33·07 cents for 1902.

Produce of the Cocoanut Palm.—The following statement shows the value of the produce exported during the last four years :—

Articles.	1900. Rs.	1901. Rs.	1902. Rs.	1903. Rs.
Arrack ...	73,652	72,082	106,332	129,964
Cocoanuts ...	646,340	773,391	711,918	649,635
Cocoanuts, Desiccated	2,237,547	2,314,708	2,870,549	3,104,609
Coir Fibre ...	718,298	700,683	778,174	793,134
Coir, Manufactured	9,857	10,561	11,559	9,575
Coir Rope ...	120,869	137,462	160,560	207,670
Coir Yarn ...	1,223,709	854,538	799,705	945,357
Copra ...	3,930,694	4,540,693	4,098,947	7,531,540
Cocoanut Oil	6,673,171	7,601,233	10,007,860	11,022,596
Cocoanut Shells	13,536	27,860	32,623	51,993
Poonac ...	790,634	937,474	1,283,264	1,499,820
Quills, Cocoanut Leaf	—	150	—	—
	16,438,307	17,970,835	20,861,491	25,945,893

There is an increase in nearly every item, the most marked increase being in copra. The exports of the produce of the cocoanut palm represent over a quarter of the total value of Ceylon produce.

Exports of Cacao.

Year.	Cwt.	Year.	Cwt.
1900 ...	33,696	1902 ...	61,476
1901 ...	47,471	1903 ...	59,098

The decrease in the exports is slight as compared with 1902. The exports are, however, greatly in excess of 1900 and 1901. The price of cacao fell from Rs. 41·28 to 38·4 a cwt. in 1903. The total value of it was nearly 2¼ million rupees.

Cardamoms.—The exports have been :—

Year.	lb.	Year.	lb.
1900 ...	584,063	1902 ...	672,896
1901 ...	557,984	1903 ...	913,920

United Kingdom took over 50 per cent. of the quantity exported, and British India 25 per cent. Germany and Japan come next with 783 cwt. and 216 cwt. respectively to their credit. The total value for last year was Rs. 907,419.

Exports of Cinnamon.

Year.	lb.	Value. Rs.
1900 ...	4,616,108	2,549,762
1901 ...	4,458,720	2,386,802
1902 ...	4,365,872	2,468,948
1903 ...	5,433,568	2,444,564

Though the export of this article was larger than in the three preceding years, the average price was lower. The value for 1903 was more than double that of 1895, the increase in the quantity between the same two years being over 56 per cent.

Exports of Coffee.

Year.	Cwt.	Value. Rs.
1900 ...	10,243	593,634
1901 ...	9,090	537,482
1902 ...	10,401	639,795
1903 ...	8,973	508,410

The export of the above for 1903 is the lowest on record. Of the 8,973 cwt. exported, coffee plantation represents 8,784 cwt. entered at an average value of Rs. 57·16 per cwt., a fall in price of Rs. 4·59 per cwt., and in quantity of 1,531 cwt. as compared with 1902.

Tobacco.

Year.	Quantity in Cwt.	Value. Rs.
1900 ...	42,523	981,840
1901 ...	28,283	674,181
1902 ...	43,982	1,029,806
1903 ...	37,071	894,682

The above is all unmanufactured tobacco grown for the most part in Jaffna. The trade is solely with Southern India.

Exports of Arecanuts.

The following are the figures :—

Year.	Cwt.	Value. Rs.
1900	113,942 ...	1,597,755
1901	104,215 ...	1,611,546
1902	90,691 ...	1,001,009
1903	117,537 ...	1,174,659

The fall in value below 1900 and 1901 is significant, as the quantity exported in 1903 is the most favourable of the four.

Rubber Seed and Rubber.

204 cwt. of seed were exported, as against 141 cwt. in 1902. The exports of rubber also increased over 100 per cent. during the present year, the quantities being 389 cwt. and 189 cwt. for 1903 and 1902 respectively. United Kingdom alone took 363 cwt. in 1903, valued at Rs. 75,218, as against 189 cwt., valued at Rs. 39,332 in 1902. In 1901 the quantity of rubber exported was only 66 cwt., valued at Rs. 11,986.

Customs Revenue.

No changes were made in the tariff in 1903. The Customs revenue for this year is so far the best on record. It amounted to Rs. 8,043,062, against Rs. 7,630,175 in 1902, a result mainly due to larger imports of grain, spirits and cordials, and other goods. Ninety per cent. of the collections were made in Colombo. It must be noticed that the appreciable increase is almost solely in imports, the collections from exports all showing a deficit, except arrack.

Balance of Trade.

The figures appended give the relation which exports bear to imports in each of the last five years :—

Year.	Excess of Exports. Rs.	Excess of Imports. Rs.
1899	9,863,000 ...	—
1900	— ...	8,537,000
1901	— ...	3,867,000
1902	12,848,000 ...	—
1903	11,243,000 ...	—

SHIPPING.

The total number of vessels which entered and cleared from the ports of the Island during the last three years was as follows :—

Year.	Entered. No.	Entered. Tons.	Cleared. No.	Cleared. Tons.
1901 ...	3,367 ...	4,557,607 ...	3,436 ...	4,470,963
1902 ...	3,418 ...	4,981,584 ...	3,429 ...	4,973,672
1903 ...	3,452 ...	5,184,690 ...	3,457 ...	5,132,048

The steamer tonnage was nearly 98 per cent. of the whole. The number of steamers which entered Colombo, exclusive of those calling to coal and for orders was 1,877 with a tonnage of 4,691,020, the average tonnage of each steamer being 2,499 tons. The vessels which enter for the most part fly the British flag, the tonnage for 1903 under that flag representing 69 per cent. of the whole. Germany comes first among the vessels under foreign flags, with nearly 5 per cent. of the number and 12·4 per cent. of the tonnage. The other vessels flying the principal flags are :—

	Year 1903. No.	Year 1903. Tons.
French	115 ...	279,312
Japanese	69 ...	238,691
Austrian	59 ...	180,301
Russian	47 ...	127,257

The highest proportion of the tonnage of foreign vessels is of those flying the German and Japanese flags.

W. H. JACKSON,
Principal Collector.

H. M. Customs,
Colombo, April 20, 1904.

X.—1904.

THE IRRIGATION FUND.

STATEMENT

OF

THE SUMS APPORTIONED TO EACH PROVINCE

FOR

EXPENDITURE IN 1904.

Ordered by His Excellency the Governor to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 5 cents.

1904.

THE IRRIGATION FUND.

STATEMENT (under Section 8 of Ordinance No. 23 of 1889) of the Sums apportioned during the Year 1904 from the Irrigation Fund to each Province, for the Construction, Repair, and Improvement of Irrigation Works therein, and for all necessary Expenses incidental to the carrying out of the Ordinance.

Province.	Surveys.	Salaries and Allowances Vote, 1904: Rs. 50,418.	Maintenance Vote, 1904: Rs. 90,000.	Irrigation Fund Proper, *i.e*, exclusive of Votes on Estimates under Ordinance No. 6 of 1892: Rs. 800,000.	Total.
	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
Western	No separate Vote for Surveys. Included in the vote for Construction.	—	419 0	1,000 0	1,419 0
Central		—	2,585 0	33,000 0	35,585 0
Northern		—	9,500 0	187,100 0	196,600 0
Southern		—	19,593 0	83,000 0	102,593 0
Eastern		—	15,248 0	217,500 0	232,748 0
North-Western ...		—	11,913 0	46,500 0	58,413 0
North-Central ...		—	24,134 12	187,500 0	211,634 12
Uva		—	3,778 0	4,250 0	8,028 0
Sabaragamuwa ...		—	3,600 50	3,750 0	7,350 50
Miscellaneous ...		49,930 0*	—	36,400 0†	86,330 0
Total ...	—	49,930 0	90,770 62‡	800,000 0	940,700 62

* Provides for the horse allowance of the Director of Irrigation, commuted allowance of twenty Irrigation Engineers, one Irrigation Surveyor, four Assistant Engineers, ten Assistant Irrigation Surveyors, five Chief Irrigation Inspectors, eleven Irrigation Inspectors, thirty-five First and Second Class Sub-Inspectors, twenty-one Wewa Lekamas, eight Katti Kanganies, and for paying travelling expenses of officers.

	Rs. c.
† Provides for balance on estimates brought forward from previous years	3,500 0
For minor surveys not exceeding Rs. 500 each	2,500 0
Urgent minor works ...	2,500 0
Instruments and office requisites ...	2,100 0
Tools and plant	18,500 0
Stationery	1,500 0
Office contingencies	300 0
Office furniture	1,000 0
Special sick allowances	1,500 0
House rent to Irrigation Officers ...	1,500 0
For the purchase of tents ...	1,500 0
Total ...	36,400 0

‡ The excess Rs. 770·62 will be met from the savings on the Construction Vote.

Irrigation Department,
Colombo, May 11, 1904.

H. PARKER,
for Director of Irrigation.

XI.—1904.

PAPERS

RELATING TO

CEYLON AND THE LONDON UNIVERSITY.

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 15 cents.

1904.

CEYLON AND THE LONDON UNIVERSITY.

No. 1.

The PRINCIPAL, University of London, to Governor Sir J. WEST RIDGEWAY, G.C.M.G., K.C.B., K.C.S.I.

University of London,
South Kensington, S.W., July 26, 1902.

SIR,—I LEARN from a paragraph in the "Times" of July 24 that there have lately been some Conferences between University and Colonial authorities as to the relations between the English and Colonial Universities. The University of London was not represented at these Conferences, and I think it therefore desirable to draw your attention to the changes which have lately been made in the organization of this University.

For many years past the University has only been an examining body, and degrees were given to students, wherever educated, who passed certain examinations. This work is still carried on, and students who take degrees in this way are now called External Students.

But for the past two years the University has had parliamentary powers to add to its external work, that of organizing higher teaching in London. All the principal educational institutions in London are now directly connected with the University, and are represented on the Boards of Studies on an Academic Council, and on the Senate, which is the governing body of the whole. Students at these institutions who pursue a course of study for three years under conditions approved by the Senate, and who also pass certain examinations, which are not necessarily the same as those for the external students, can obtain the degree, and during their period of study are called Internal Students.

As you are aware, the University has for many years past carried on examinations at Colonial centres, the same papers being set to the candidates as are set simultaneously to candidates in this country. This system is capable of extension, and thus the external degrees of the University can be obtained by examinations held in the Colonies as well as in this country. Further, the Matriculation Examination is excused for candidates who have taken the degree of a Colonial University, though, should they desire to take the internal degree, they would have to complete a three-years' course of study in London. Lastly, graduates of an approved Colonial University, which term includes nearly all those institutions, can, under certain circumstances, be excused all the examinations for the first degrees of the University of London, and can enter as internal students on a two-years' course of study in London, at the end of which, if they pass the requisite examinations, they can obtain a Doctor's degree. The conditions are briefly these, that the candidate must produce evidence of having taken his degree at the Colonial University, and must obtain a certificate from a recognized teacher in London that the teacher believes him to be competent to undertake the advanced studies upon which he proposes to enter, and is willing to supervise those studies for the period of two years during which they must be carried on.

These facts will, I hope, show you that the University of London is willing to do all that it can to make the educational advantages of the metropolis, which for post-graduate study are unique, accessible to members of Colonial Universities. Whether points of the kind to which I have referred were under discussion at the meeting mentioned in the "Times" I do not know, but I trust that if, in the opinion of Colonial authorities, the University of London can do anything further to co-ordinate the educational system of the Empire, you will be good enough to inform me, as I feel sure that the Senate would listen favourably to any well-considered scheme for that purpose.

I am, &c.,

ARTHUR W. RÜCKER,
Principal.

No. 2.

The DIRECTOR OF PUBLIC INSTRUCTION to the Hon. the COLONIAL SECRETARY.

No. 141/B. Colombo, November 24, 1902.

Report.

THE Board of Education is now engaged in considering the state of higher education in Ceylon. One of the points specially noted for consideration is whether anything further can be done to encourage students in Ceylon to take up the London course. I will lay before the Board a copy of the annexed letter,* and if they make any recommendation for dealing with the question I will communicate it to Government.

J. HARWARD,
Acting Director.

* See No. 1 *supra*.

No. 3.

Governor Sir WEST RIDGEWAY, G.C.M.G., K.C.B., K.C.S.I., to the Right Hon. J. CHAMBERLAIN, M.P.

The King's Pavilion,
Kandy, December 30, 1902.

SIR,—I HAVE the honour to forward an extract from the introductory address delivered by Sir Arthur Rücker, Principal of the University of London, at St. Mary's Hospital School on the 3rd October, 1902, relative to a resolution to establish one general examination for the scholarships of the London University and for those of any school of the University or of any body of trustees, and to request that you will be so good as to obtain and supply me with any available information as to the examination referred to.

I have, &c.,
WEST RIDGEWAY.

Enclosure in No. 3.

Copy of passage referred to.

"IT is, however, the earnest desire of the University authorities to reduce the number of examinations as far as possible, and they have resolved upon the establishment of one general scholarship examination with the requisite number of options and variants in which the University will examine, not only for its own scholarships, but for those of any school of the University or of any suitable body of trustees which may be desirous of using the University examination for that purpose."

No. 4.

EARL OF ONSLOW, G.C.M.G., to Governor the Right Hon. Sir J. WEST RIDGEWAY, G.C.M.G., K.C.B., K.C.S.I.

Ceylon.—General. Downing street, January 29, 1903.

SIR,—WITH reference to your despatch No. 586 of the 30th ultimo, I have the honour to transmit to you for your information the papers noted in the subjoined schedule.

I have, &c.,
ONSLOW,
for Secretary of State.

Date.	From	To	Subject.
28th Jan., 1903	University of London	Colonial Office	London University Scholarships (pamphlet enclosed*)

Enclosure in No. 4.

The ACADEMIC REGISTRAR, University of London, to the UNDER SECRETARY OF STATE, Colonial Office.

University of London,
January 28, 1903.

SIR,—REFERRING to your letter of 24th January, No. 2,355/1903, I am directed to transmit to you a copy of a pamphlet* issued by the University, giving particulars concerning prizes, exhibitions, scholarships, and studentships open to students of the University of London, and I am to state that the University is willing to do all in its power to meet the wishes of any individuals or institutions that may desire to award exhibitions or scholarships in connection with the examinations already held by the University for junior or more advanced students. It will be noticed that the junior type of examination is given on page 5 of the pamphlet under the special regulations for the Mitchell Scholarships, and again on page 7 under the regulations for the St. Dunstans-in-the East Charities Exhibitions, and that the more advanced scheme of examination is given on pages 8–9 under the Regulations for Gilchrist Scholarships. It will be possible for the University to award exhibitions or scholarships offered by external bodies in connection with either of these examinations.

I am, &c.,
F. FRANK HEATH,
Academic Registrar.

* Not reproduced.

No. 5.

The Hon. the COLONIAL SECRETARY to the PRINCIPAL, University of London.

Colonial Secretary's Office,
Colombo, March 30, 1903.

SIR,—WITH reference to your letter of the 26th July last, I am directed by His Excellency the Governor of this Colony to request you to be so good as to favour the Government with the following papers and information :—

(1) The regulations for the school-leaving certificate examination, with specimens of papers set. Is the University prepared to hold this examination in Ceylon ?

(2) The papers set for the Mitchell Scholarship, after the examination in September next. If this examination were adopted as the method of awarding the English University Scholarship given by the Ceylon Government, would the London University allow additional subjects to be selected from the prescribed groups, as, for instance, English Literature as well as English History? Would it be possible to include in the examination a paper on the English Language ?

(3) Is there any prospect of the University holding in Colombo either the Intermediate Examination in Science or the B.Sc. Examination ?

2. With regard to inquiry (3), I am to state that new laboratories are in course of erection at the Technical and Medical Colleges in the Island, which will be furnished with sufficient equipment for the practical parts of the examinations. The Department of Public Instruction could be responsible for general supervision, and could submit beforehand to the London University a list of competent persons from whom supervising examiners could be selected for the practical work. A sufficiently large local fee would probably be levied to cover the cost of supervision.

3. In this connection I am to add that there are at present two obstacles which prevent the best of the Ceylon schools from taking up the External Examinations of the London University, viz.:—

(1) The preparation for the London Intermediate is felt to interfere with preparation for the examination for the English University Scholarship awarded annually by the Ceylon Government on the result of an examination held by the Oxford and Cambridge Joint Board.

(2) So long as it is impossible to hold the London Science Examination in Ceylon, the adoption of the London course means the exclusion of Science from the higher work of the schools.

4. If these two obstacles be removed, a few of the best schools in the Island would be in a position to work up to the standard of the Intermediate in Arts and in Science under their present circumstances as to staff.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 6.

The EXTERNAL REGISTRAR, University of London, to the Hon. the COLONIAL SECRETARY.

University of London,
South Kensington, S.W., April 23, 1903.

SIR,—I HAVE the honour to acknowledge the receipt of your letter of the 30th ultimo.

In respect to your first inquiry, that letter has been handed to my colleague, the Registrar to the Board for the Extension of University Teaching, to whose Department it belongs, and from whom you will hear in due course.

With regard to your inquiry No. 3, I beg to say that I will take care to place your letter before the next meeting of the Council for External Students, where I am sure that the important matters which it raises will receive very attentive consideration.

I am, &c.,
ALFRED MILNES,
External Registrar.

No. 7.

The SECRETARY to the Registrar of the University Extension Board, University of London, to the Hon. the COLONIAL SECRETARY.

University of London,
April 24, 1903.

SIR,—IN the absence of the Registrar for a short holiday I beg to enclose in accordance with your request copies of the regulations for our school-leaving examination.

The papers set will be of a standard equal to that of the Matriculation Examination of the University of London, or, in the case of special advanced papers, of a higher standard approximating to that of the Intermediate Examination.

Your question with regard to the holding of school-leaving certificate examinations in Ceylon will be brought before the notice of the Board at their next meeting.

I am, &c.,
J. TRAVIS MILLS,
Secretary to the Registrar of the
University Extension Board.

No. 8.

The REGISTRAR, University Extension Board, University of London, to the Hon. the COLONIAL SECRETARY.

University of London,
South Kensington, S.W., May 12, 1903.

SIR,—WITH reference to your letter of the 30th March, I am desired to say in reply to the first paragraph, which falls into the department of work under this Board, that one of the essential features of the school-leaving scheme is the holding of an oral examination of the candidates at the school, and a slight inspection of the school sufficient to enable the Examiners to judge of the conditions under which the work is done. It would not be possible to hold the examination at present outside the United Kingdom, as it would clearly be impossible to send the Inspectors to inspect schools away from England on account of the cost.

The other inquiries in your letter fall into other departments of the University, and will be replied to by one or other of my colleagues in due course.

I have, &c.,
R. DAVIES ROBERTS,
Registrar of the University Extension Board.

No. 9.

The PRINCIPAL, University of London, to the Hon. the COLONIAL SECRETARY.

University of London,
May 27, 1903.

SIR,—I HAVE the honour to revert to your communication of the 30th March last, which was laid before and considered by the Senate of this University at its last meeting.

I am directed to communicate to you the following resolutions which the Senate passed on the recommendation of the Council for External Students :—

> That the University arrange to conduct the examination for the English University Scholarship given by the Ceylon Government by setting papers of the Matriculation standard, or, if necessary, of a more advanced character.
>
> That if the Ceylon Government will undertake to provide Assistant Examiners to supervise the practical examinations and report thereon to the Examiners, the University hold the Science Examinations in Ceylon.

In forwarding these resolutions it may be well to explain that it appears to the University that it would be less difficult to utilize the Matriculation Examination for the purpose that the Ceylon Government desires than the examination for the Mitchell Scholarship, the papers for which have, in the nature of the case, to be set at shorter notice than the papers for the Matriculation Examination.

As to the taking of additional subjects in the Matriculation Examination, I do not think that it would present any serious difficulty. Arrangements are already being made by which a candidate can take at any Matriculation Examination any number of subjects up to seven. In this connection I may be permitted to point out that the English paper in the Matriculation Examination is, under the revised regulations, of a distinctly literary character; while if it is desired to carry further the study of History, there is a "Modern History" paper which would possibly meet the requirements of the case.

I shall be glad to hear further from you on this matter, and would beg, in conclusion, to assure you of my desire to fall in with the wishes of the Ceylon Government in every way that may be found possible.

I am bound to add that in expressing this as my own view, and in thus communicating to you the view taken by the Senate, I am assuming throughout the willingness of the Colonial Office here to co-operate in the necessary arrangements.

I am, &c.,
ARTHUR W. RÜCKER,
Principal.

No. 10.

The DIRECTOR OF PUBLIC INSTRUCTION to the Hon. the COLONIAL SECRETARY.

No. E 295/B. June 29, 1903.

THESE papers are most important. I have kept copies of them. If the proposals contained in them are accepted, it will involve rather sweeping changes. Before taking any action in the matter I must consult the Board of Education. Meanwhile Sir Arthur Rücker might be thanked for the very liberal offers made by the Senate of the University of London, and might be informed that the matter will be referred to the Board of Education and a reply sent as soon as possible.

J. HARWARD,
Acting Director of Public Instruction.

No. 11.

The Hon. the COLONIAL SECRETARY to the PRINCIPAL, University of London.

Colonial Secretary's Office,
Colombo, July 27, 1903.

SIR,—I AM directed to acknowledge the receipt of your letter of the 27th May communicating the following resolutions passed by the Senate of the London University on the recommendation of the Council for External Students :—

That the University arrange to conduct the Examination for the English University Scholarship given by the Ceylon Government by setting papers of the Matriculation standard, or, if necessary, of a more advanced character.

That if the Ceylon Government will undertake to provide Assistant Examiners to supervise the practical examinations and report thereon to the Examiners, the University hold the Science Examinations in Ceylon.

2. I am to convey to you the thanks of this Government for the very liberal offers made by the Senate of the University, and to state that the proposals will be at once referred to the Board of Education of this Colony. On receipt of a reply from that body a further communication will be addressed to you as soon as possible.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 12.

The Hon. the COLONIAL SECRETARY to the PRINCIPAL, University of London.

Colonial Secretary's Office,
Colombo, September 30, 1903.

SIR,—IN continuation of my letter of the 27th July last regarding the resolutions passed by the Senate of the London University, on the recommendation of the Council for External Students, as to the proposal that the University should conduct the Examination for the English University Scholarship given by the Ceylon Government, and should also hold Science Examinations in Ceylon, I am directed to inform you that the Board of Education of this Colony is anxious that if possible the Examinations for the Ceylon University Scholarship should be carried out by the University of London, and that this should be done in such a way as to encourage students in the Ceylon Colleges to take up the External Examinations of the University in Arts and Science.

2. The Board of Education explains that the standard of the present examination, which is conducted by the Oxford and Cambridge Board for Schools Examinations, is very much above that of the London Matriculation in all subjects, and that there seems to be no possibility of adapting the Matriculation Examination to the required purpose. The Board, however, is of opinion that the Intermediate Examinations in Arts and Science might suitably be utilized for the purpose of awarding the Ceylon University Scholarship, if it were made permissible that the Honours Papers should be taken up in Ceylon, and if some arrangement could be made by which some other subject might be substituted for the Modern Languages section.

3. The Board of Education suggests that either Logic, if that subject has not been taken up as a substitute for Mathematics, or perhaps Political Economy, might be allowed as a substitute for the Modern Languages section, adding that there is a strong feeling among most of the members of the Board that the study of the Modern Languages of Europe ought not to be made a compulsory part of the curriculum of Colleges in Ceylon.

4. I am to state that it will be a source of much gratification in Ceylon if the proposals of its Board of Education can be favourably considered by you.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 13.

The EXTERNAL REGISTRAR, University of London, to the Hon. the COLONIAL SECRETARY.

University of London,
South Kensington, S.W., October 20, 1903.

SIR,—I HAVE the honour to acknowledge receipt of your letter of the 30th September last, having reference to the proposed holding of certain of the examinations of this University in Ceylon. And I have to inform you that that letter shall be laid before the Council for External Students of this University at the earliest opportunity.

I am, &c.,
ALFRED MILNES,
External Registrar.

No. 14.

The Hon. the COLONIAL SECRETARY to the EXTERNAL REGISTRAR, University of London.

Colonial Secretary's Office,
Colombo, November 16, 1903.

SIR,—I AM directed to thank you for your letter No. 63.2 of the 20th October, intimating that my letter of the 30th September last regarding the proposal to hold certain examinations of the London University in this Colony will be laid before the Council of External Students of the London University.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 15.

The Right Hon. ALFRED LYTTELTON, M.P., to Governor Sir H. A. BLAKE, G.C.M.G.,

Ceylon.—No. 450. Downing street, December 2, 1903.

SIR,—I HAVE the honour to transmit to you, for your information, a copy of a letter which has been received from the Principal of the University of London, after an interview which took place in this Office, with regard to the desire of the Government of Ceylon that the conduct of certain Scholarship Examinations held in the Colony should be undertaken by the University, and that the Intermediate and Degree Examinations in Science should be held in the Island, in addition to the Arts and Laws Examinations of the University.

2. The correspondence which has taken place on this subject between the London University and the Colonial Secretary has been communicated to me, and I need hardly say that I am heartily in accord with the desire of the Colonial Board of Education to raise the educational standard in the Island, and that the negotiations which have been conducted with the University with this object in view have my approval. I have therefore felt no hesitation in agreeing, on behalf of the Colonial Government, to the suggestion that Dr. Osborne should call at Colombo on his way to Melbourne in January next in order to prosecute the inquiry and discuss the details referred to in Sir A. Rücker's letter, or in giving an assurance that the Colony will be prepared to bear its share of any expense incurred in connection with the inquiry.

3. I enclose for your information a copy of the reply which has been returned to the London University, and have to request that you will arrange for every facility to be afforded to Dr. Osborne in his inquiry and in obtaining all the information desired by the University authorities.

I have, &c.,

ALFRED LYTTELTON.

Enclosure No. 1 in No. 15.

The PRINCIPAL, University of London, to the SECRETARY OF STATE FOR THE COLONIES.

No. 63. University of London,
South Kensington, S.W., November 24, 1903.

SIR,—IN pursuance of the interview which I had yesterday with Mr. Johnson and Mr. Round of your Department, I have now to say that, from the correspondence with which you have been made acquainted as having taken place between this University and the Educational Department of the Ceylon Government, it appears that that Government is to be understood as making certain proposals which this University is prepared to meet in a spirit of friendly consideration, provided that certain conditions, regarded by the University as essential, can be fulfilled.

Broadly stated, it would appear that the desire of the Ceylon Government is that this University should undertake the conduct of the Scholarship Examinations there held, and should also hold in the Island the Intermediate and Degree Examinations in Science, in addition to the Arts and Laws Examinations hitherto held there.

Any compliance with that request will involve the University in a totally new departure, inasmuch as no practical examinations have as yet been held beyond the limit of the United Kingdom. But the University is disposed to consider the feasibility of conducting even these examinations if the Ceylon Government will undertake to provide Assistant Examiners to supervise the practical examinations and report to the Senate upon them. But beyond the general statement of principle, to which alone the Senate devoted its attention, there are a number of administrative details, which, in the ordinary course of events, would have to be discussed by correspondence between myself and the Ceylon authorities. Thus, we cannot here be aware of the nature and extent of the laboratory equipment in Ceylon with the fullness of information necessary, in the first place, for passing a judgment upon its efficiency and standard; and, in the second place, for drawing up examination papers with a reasonable regard to the capabilities of the laboratory in which the examination would have to be carried on.

To obtain information on these and similar points more easily than could be done by correspondence, the University proposes to take advantage of the fact that the newly appointed Professor of Physiology (Dr. W. A. Osborne), in the University of Melbourne, who is to sail early in January next to take up his appointment, is well acquainted with the requirements of the examinations of this University, having been one of its Scientific Assistants; and it is suggested that he might be commissioned to call on his way and inspect and report upon the equipment of the Ceylon laboratories. Such a commission, it has been ascertained, he would be prepared to accept, with of course a reasonable fee attached thereto. And it is with a view to learning whether the Ceylon Government would be willing to receive him in that capacity, and to bear such share of the involved expenses as might be agreed upon that I have to ask the co-operation of your Department.

I must, however, add that there are other issues of some importance connected with the question to be discussed. The recent inquiry of the Ceylon Government as to whether the University would carry out the school-leaving examination in Ceylon, the question of the modification of the Matriculation Examination so as to include Tamil, the details of the arrangements for the B.Sc. Examination, the question as to the number of candidates likely now or in the future to avail themselves of their various privileges if granted, could all be better discussed *vivâ voce* by Dr. Osborne than by correspondence.

The question is, whether Professor Osborne, if appointed to represent the University, will be received by the Ceylon Government as a person with whom it is prepared to conduct negotiations, and to whom it is willing to give all the information required by the University.

It might be well to add that his report, whatever it might be, would be regarded as of a strictly confidential nature. And as preparations would have to be made in a very short space of time, you might think it well to communicate by wire with Ceylon.

I have, &c.,

ARTHUR W. RÜCKER,
Principal.

Enclosure No. 2 in No. 15.

The ASSISTANT UNDER SECRETARY OF STATE to the PRINCIPAL, University of London.

No. 42752/1903. Downing street, December 1, 1903.

SIR,—I AM directed by Mr. Secretary Lyttelton to acknowledge the receipt of your letter (No. 63) of the 24th instant with regard to the desire of the Government of Ceylon that the conduct of certain Scholarship Examinations held in the Colony should be undertaken by the University of London, and that the Intermediate and Degree Examinations in Science, in addition to the Arts and Laws Examinations, should also be held in the Island.

2. I am to state that Mr. Lyttelton much appreciates the spirit of friendly consideration with which the proposals of the Colonial Government have been met; and as he gathers from the correspondence between that Government and the University, copies of which you were previously good enough to furnish to this Department, that the Ceylon Government is anxious to improve its educational system, so as to approach the standard required by the University of London, he gladly agrees on its behalf to the suggestion that Dr. W. A. Osborne, the newly appointed Professor of Physiology in the University of Melbourne, who is to sail in January next to take up his appointment, should be commissioned to call at Ceylon on his way and inspect and report upon the equipment of the laboratories in the Colony, and to discuss with the Colonial Government and Board of Education the other issues in connection with the scheme which are mentioned in your letter.

3. Mr. Lyttelton is therefore communicating to the Governor of Ceylon a copy of your letter and of this reply, with a request that the necessary facilities may be granted to Dr. Osborne for prosecuting his inquiry; and he has no doubt that the Colonial Government will readily agree to bear its share of the expenses involved by Dr. Osborne's mission.

I am, &c.,
C. P. LUCAS.

No. 16.

The DIRECTOR OF PUBLIC INSTRUCTION to the Hon. the COLONIAL SECRETARY.

No. 96/B. Public Instruction Office, Colombo, March 25, 1904.

The University Scholarship and the Examinations of the University of London.

SIR,—WITH reference to the despatch of the 2nd December last, No. 450, from the Secretary of State on the above subject and the connected correspondence between the Secretary of State and the University of London, I have the honour to submit for your consideration proposals for remodelling the higher education of this Colony so as to render it practically possible for students to take up in Ceylon the Arts and Science courses of the University of London, and so as to attach the University Scholarship awarded annually by Government to those examinations instead of to the special examination now held by the Oxford and Cambridge Joint Board. Dr. Osborne, M.B., D.Sc., who visited this Island on behalf of the London University, spent a fortnight in Ceylon; he thoroughly investigated the present and prospective equipment of the Medical and Technical Colleges, and he visited the Royal, St. Thomas's, and St. Joseph's Colleges. He was also present at two prolonged meetings of the Board of Education. I attach to this letter the following papers:—

(*a*) A copy of the minutes of meetings of the Board of Education held on 30th January and 5th February.
(*b*) An estimate by Dr. Osborne of the probable annual cost of holding in Ceylon its Intermediate and B.Sc. Examinations in Science.
(*c*) A letter to me from Dr. Osborne with regard to some additional equipment required in the Physiological Laboratory of the Medical College.
(*d*) An estimate by me of the probable initial and recurring cost of the scheme.

2. The reasons which render a change desirable are these. The present examination held by the Oxford and Cambridge Joint Board is not connected with any recognized scheme or progressive series of examinations. It enables the scholarships to be awarded, but candidates who have failed to obtain the scholarship, and yet have done creditably, obtain no certificate as to the value of their work. It is very desirable that the examination for the University Scholarship should itself form a step in the course of some recognized University. It has been for some years possible to take up the Arts Examination of the London University in Ceylon, but the University Scholarship has prevented all but a very few from availing themselves of these examinations. So long as there is a Scholarship Examination, the best pupils of all the schools will concentrate their efforts upon it, and it is no use attempting to direct them to any other course.

3. It has not been possible to suggest a scheme for attaching the Scholarship Examination to the Examination of the London University until last year. The Matriculation has always been too easy a test; the Intermediate Arts Examination contains no work whatever in Science; and the London University has, until last year, declined to hold any of its Science Examinations out of London. To attach the scholarship to the Intermediate Arts Examination alone would have been a deathblow to any development of Science teaching in the Island.

4. The resolution of the Senate of the London University communicated to you by Sir Arthur Rücker in his letter of 27th May, 1903, held out a prospect of holding the London Science Examinations in Ceylon, and the visit of Dr. Osborne has removed all doubt about this prospect; provided that the Ceylon Government is ready to undertake certain definite and very moderate expenditure. The initial expenditure for additional equipment will be £530, the annual expenditure will be £240, or half the amount for only the Intermediate Examination in Science; this is an outside estimate of the annual cost, which would probably be considerably less. The holding of these examinations in Ceylon will not only give an impetus to Science in the schools and colleges that have

hitherto competed for the University Scholarship, but it will also be an enormous boon to the Medical College, the students of which will be able to take up the Science Examinations of the London University without specially proceeding to England for the purpose.

5. The Board therefore now propose that the University Scholarship be attached to the Intermediate Examinations in Arts and Science of the London University, with the following modifications:—

(*a*) In the case of the Arts Examination candidates shall be allowed to substitute (for scholarship purposes only) two higher classical or two higher mathematical papers for the French or German papers which form one section of the London Examination. Candidates taking these papers up may for the purpose of passing the Intermediate Examination take up the French or German papers as well, but will not be allowed to count the marks towards the aggregate for the scholarship. The reason for this is that one modern language is a compulsory subject for the London Intermediate in Arts, but it is felt that it ought not to be a compulsory subject for the University Scholarship.

(*b*) Those who take up the Intermediate Science Examination as candidates for the University Scholarship must also take up the English section of the Intermediate Arts Examination. The reason for this is that it is not desirable to exclude regular work in English from even the highest forms of those colleges which prepare candidates for these examinations.

6. The Board also proposes that two scholarships of three years' duration be substituted for the present annual scholarship of four years' duration. This, when it has come fully into operation, will raise the full annual cost of the University Scholarship from £950 to £1,500. It is, however, the only way of satisfactorily settling the question. The present method of awarding the scholarship in alternate years by an examination in classical subjects one year, and an examination in Mathematical and Science subjects the next year, has proved most unsatisfactory, and it is quite time that it was altered. Unless, however, a second scholarship is established, it will be necessary to continue it under the new regulations, and it will be a great defect in the scheme. As a justification for the additional expenditure, it must be remembered that students from the Medical and Technical Colleges will now be eligible for competition in the Scholarship Examination. It must also be remembered that the scheme that is now being suggested renders unnecessary for the present any proposal for the establishment of a local University. It will give to the residents in Ceylon the best possible equivalent for a local University so far as examinations are concerned: it will provide facilities and inducements for work in Arts and Science leading to degrees that are recognized all over the world, and which will be attainable by students without leaving Ceylon. In view of the advantages secured the additional cost is one which is well worth incurring.

7. The question may be asked: Is this a final estimate, or will there be more expenditure in the future? So far as the cost of examinations and scholarships is concerned, it is, I believe, a final estimate, and also an estimate of the maximum cost which can be incurred by adopting the scheme. I have not included in it the cost of maintaining in proper condition the equipment of laboratories. This is a charge which would have to be incurred in any case without reference to the scheme now proposed. There is, however, a further question, viz., whether it may be necessary or desirable for Government in the future to provide for any additional staff in either the Royal, or the Technical, or the Medical College in order to provide fuller teaching for those who wish to take up a University course in Ceylon. It is not possible at present to answer that question. The scheme as it stands deserves a fair trial, and I hope that it will be adopted by Government, so that the Science Examinations may be held in this Island in 1905, and the new regulations for the University Scholarship may come into force in 1906.

I am, &c.,

J. HARWARD,
Director.

A.—Minutes of Meetings of the Board of Education held on 30th January and 5th February.

Minutes of the proceedings of a meeting of the Board of Education held at the Office of the Director of Public Instruction on 30th January, 1904, to confer with Dr. Osborne, Delegate from London University, on the question of holding the University's Examinations more completely in Ceylon, and of the University undertaking the examination for the Ceylon Scholarship. The following members of the Board were present:—The Chairman, the Acting Principal of the Royal College, the Principal of the Technical College, the Rev. H. Highfield, the Rev. C. Collin, Mr. D. B. Jayatilleka, Mr. C. Brito, and Mr. R. B. Strickland. The Warden of St. Thomas's College was also present.

The Director reviewed the steps already taken, and read a letter from the Principal of the London University to the Colonial Office on the question of holding the University's Science Examinations in Ceylon, and of conducting the Scholarship Examinations. As many inquiries were necessary, Dr Osborne had been appointed by the University to visit Ceylon on his way out to Australia in order to make necessary inquiries and to report to the University authorities.

Dr. Osborne remarked that the standard of the Matriculation Examination was not sufficiently high for the Scholarship Examination to be taken in connection with it, and explained that the Honours Examination of the Intermediate and Degree Examinations could not be held outside London. He thought that the Intermediate Examinations might be adapted to requirements for the Scholarship Examination. On the question of French or German in the Intermediate Art Examination, he did not think any alternative subject could be allowed where the examination was taken in connection with the B.A. Degree, but thought an alternative might be allowed if the examination were taken for deciding the scholarship alone. The Intermediate Science Examination could be utilized for the Scholarship Examination, provided the examination could be held in Ceylon, and Dr. Osborne was of the opinion that when the prospective laboratories and provision of apparatus have been completed, the University might allow the Science Examinations to be conducted here. He thought that the laboratory provision might then be considered up to the standard of the University for both the Intermediate and the B.Sc. Examination. It would, however, be necessary that the Government of Ceylon should guarantee that the laboratories will be kept up to date, and that local examiners should

be appointed for the practical parts of the examination. An assurance would also have to be given by the Government that the persons appointed as local examiners are fully competent.

Dr. Osborne saw no reason why inspection of schools should not also be undertaken by the University, provided a suitable Inspector could be found. The leaving-certificate examination was of a standard not lower than the Matriculation Examination, and could be so arranged as to admit those who obtain the certificate to the Degree Examinations. The optional subjects to take the place of the French or the German of the Intermediate Examinations in Arts taken up for the scholarship purposes alone might be higher classics or higher mathematics.

In reply to the Warden of St. Thomas's, Dr. Osborne did not think candidates for the scholarship need have passed previously the Matriculation Examination, but said the question would have to be referred to the University authorities.

1. Proposed by the Rev. W. A. Stone, and seconded by the Rev. H. Highfield, that "in any scheme for adopting the Intermediate Arts Examination for awarding the Ceylon Scholarship, as optional subjects to French or German, two higher classical or two higher mathematical papers may be taken for scholarship purposes only, carrying 50 per cent. higher marks than the French or German papers. Candidates taking these papers may for the purposes of passing the Intermediate Examination take up French or German, but will not be allowed to count the marks."

2. Proposed by the Rev. H. Highfield, and seconded by Mr. Walker, that "for purposes of the Scholarship Examination those who take the Intermediate Examination in Science must take the English section of the Intermediate Examination in Arts."

3. Proposed by the Rev. C. Collin, and seconded by the Rev. H. Highfield, that "when the London Science Examinations are allowed to be taken in Ceylon, the Government should be requested to substitute two scholarships of three years' duration every year for the present annual scholarship of four years' duration, so that one shall be attached to the Intermediate Examination in Arts and the other to the Intermediate Examination in Science."

4. Proposed by the Rev. C. Collin, and seconded by Mr. D. B. Jayatilleka, that "Dr. Osborne be requested to refer to the University again the question of allowing another subject to be substituted for the Modern Language of the Intermediate Examination in Arts."

The meeting was adjourned to Friday, 5th February, at 3.30 P.M., to consider these questions more fully.

February 5, 1904. J. HARWARD.

Minutes of a meeting of the Board of Education held on 5th February, 1904, at the Office of the Director of Public Instruction. Present: The Chairman, the Lord Bishop of Colombo, the Rev. C. Collin, the Rev. H. Highfield, Mr. E. Human, Mr. L. Walker, Mr. C. Brito, Mr. D. B. Jayatilleka, and the Secretary.

1. Proposed by the Rev. H. Highfield, and seconded by the Rev. C. Collin, that "the words 'carrying 50 per cent. higher marks than the French or German papers' in the first resolution proposed at the previous meeting be omitted." The resolution thus amended was passed.

2. The second resolution proposed at the previous meeting was passed.

3. Mr. Walker proposed that the words "as a general rule" be inserted after the words "so that," and after the words "the other" in the third resolution, but as no one seconded the proposition the resolution was passed as it originally stood.

4. Proposed by the Rev. C. Collin, and seconded by Mr. Jayatilleka, that "the word 'optional' be inserted between the words 'another' and 'subject' in the fourth resolution passed at the previous meeting." The resolution thus modified was confirmed.

The Chairman asked the Board if it definitely approved of the Scholarship Examination being transferred from the Oxford and Cambridge Joint Board to the University of London, who should award the scholarship on the results of the Intermediate Examinations in Arts and in Science, in accordance with the first and second resolutions. The Board in expressing its approval wished to point out the great advantage that would result, if some alternative subject or subjects could be allowed in the place of French or German in the Intermediate Arts Examination.

The Board being asked by the Chairman to suggest a date at which the transfer should take place, the year 1906 was suggested as suitable, provided that a sufficient notice of the change be given.

Dr. Osborne asked the Board if there was any large demand for substituting Tamil for one of the other languages prescribed for the Matriculation Examination. The Board thought that if Tamil were allowed it would also be necessary to allow Sinhalese, which is the principal language of Ceylon, but did not consider that either language need be allowed.

B.—Cost of conducting Science Examinations in Ceylon under University of London.

Intermediate.

(*a*) *For One Candidate.*—Four subjects are selected out of seven, each having two papers written. Two subjects in addition have each one practical paper :—

	£	*s.*	*d.*
Eight papers, theoretical, specially written	16	0	0
Two papers, practical, specially written	4	0	0
Two days' attendance of Assistant Examiners, if paid as in England ...	10	0	0
	£30	0	0
In addition, cost of chemicals, &c., and share of invigilator's fee.			

(*b*) Maximum cost of intermediate, supposing all seven subjects taken :—

	£	*s.*	*d.*
Fourteen papers, theoretical, specially written	28	0	0
Four papers, practical	8	0	0
Four days' attendance of Assistant Examiners as above	20	0	0
	£56	0	0

This works out (neglecting cost of specimens and chemicals and invigilator) at £2 14*s.* per candidate, if twenty presented themselves.

B.Sc.

The cost would be almost the same.

Therefore, if Assistant Examiners are paid at the English rate of £5 per diem, £120 to £150 would cover the total annual expenses incurred by holding Intermediate and B.Sc. *External Pass* in Ceylon. If Assistant Examiners were not paid at all, then £90 to £120 would suffice. In addition, each candidate pays £5 for Intermediate and the same sum for B.Sc.

Note by Director of Public Instruction.—No additional charge is necessary for invigilation, *i.e.*, supervision of written papers. This can be done by officers of the Department of Public Instruction.

C.—Dr. D. A. Osborne, M.B., D.Sc., to the Director of Public Instruction.

Colombo, February 8, 1904.

SIR,—I BEG to state that I have inspected, on behalf of the University of London, the Physiological Laboratory of the Ceylon Medical College.

This laboratory can be utilized by the University of London for the purpose of examining students of physiology in Ceylon, if certain apparatus, already specified to the Registrar of the College and costing approximately £200, be added to what is already in stock.

The equipment for holding examinations in Botany and Zoology in the same College is quite adequate.

I remain, &c.,

D. A. OSBORNE.

D.—Proposed Changes in Higher Education.

Estimate of Probable Cost.

Initial Cost.		Rs.
Expenses in connection with Physiological Laboratory at Medical College ...	...	3,000
Additional equipment required for Technical College ...	...	5,000
Total ...		8,000

Recurring Cost.		Rs.
Cost of holding Intermediate Examinations of London University (maximum estimate)	...	1,800
Cost of holding B.Sc. Examination (maximum estimate) ...	...	1,800
Cost of duplicating University Scholarship	...	8,250
Total ...		11,850

XII.—1904.

PAPERS

RELATING TO

THE RAILWAY ACCIDENT NEAR BANDARAWELA.

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 10 cents.

1904.

RAILWAY ACCIDENT NEAR BANDARAWELA.

The GENERAL MANAGER, Ceylon Government Railway, to the Hon. the COLONIAL SECRETARY.

General Manager's Office,
No. 186. Colombo, February 25, 1904.

SIR,—IN reply to your letter No. 130 of the 18th instant, I have the honour to report that, in my opinion, the collapse of the embankment was a pure accident, which could not have been foreseen.

2. The place where the accident occurred was not known to be weak; it had never before given trouble, and was not one of the places considered by Mr. Middlemiss as calling for special attention.

3. Notwithstanding the foregoing facts, a particular inspection of this particular section of the line was made, and the embankment that collapsed was under special observation (*vide* paragraph 7).

4. There are other portions of this part of the line which have been reported upon as risky, and these are the subject of daily attention, inspection, and report by the responsible local officers.

5. The whole of this part of the line is systematically patrolled, and is frequently visited and carefully examined by the District Engineer and the Inspector of Ways and Works.

6. The Inspector for this part of the line is an officer who has been in the service fifteen years, and has had a long experience of the up-country line and of slips and washaways.

7. On the day preceding the accident the Inspector, having been informed that a slight subsidence had taken place in the bank that collapsed, specially examined it and took such precautions as his experience suggested. He considered the subsidence and a small crack on the outside were only surface indications of a slight settlement, which was not dangerous, but due to the heavy rains. He, however, appointed a watchman, who specially watched the bank until the last train for that day had passed over it. There were no signs then of any further subsidence. Next morning, the morning of the accident, the bank was specially visited and examined by the kangany in charge of the length of line in which the bank is situated and by the watchman appointed by Mr. Fraser. These men state there was no indication of any movement of the embankment, and that there was nothing whatever in its appearance to call for special notice.

8. Subsiding banks are common on the Haputale-Bandarawela section of the line, and even on the day preceding the accident the Foreman Platelayer, who has this part of the line under his charge, was engaged in running out a ballast train with ashes to make up a bank that had subsided at 150 miles 70 chains.

9. I am satisfied that all precautions which experience and human foresight could suggest were duly taken, and that the accident could not have been foreseen.

I enclose the report of the Acting Engineer of Ways and Works, which is confirmed and approved by Mr. Gray, who has since returned to the Island and assumed duties.

I am, &c.,
A. G. PERMAN,
Acting General Manager.

Enclosure.

The ACTING ENGINEER, Ways and Works Department, to the GENERAL MANAGER, Ceylon Government Railway.

No. 81. *Slip at 158¾ Miles on the Bandarawela Line.*

I HEREWITH send you plan No. 098 and estimate No. 1,455, amounting to Rs. 10,573, for carrying out the deviation of the railway at the above mileage. Plan No. 097 shows the alignment of the railway and the surroundings before the slip occurred.

I leave the description of what occurred on Saturday morning, the 30th ultimo, when No. 15 Down, leaving Bandarawela at 6.45 A.M. came to grief on the bank at 158¾, to the Driver and Guard of the train; but attach for your information statements made by Inspector Frazer, Foreman Platelayer Clifton, Kangany Whyevery, and Patrol Davith Appu.

It will be seen that a slight crack was observed on the outside of the bank, or cess, on Thursday, the 28th ultimo, and that on Friday Inspector Frazer visited the place and did what, in his opinion, was sufficient for the safety of the line.

I may say that during heavy rains a slight subsidence of the rails is no uncommon thing, and that surface cracks on the cesses of banks are often to be seen.

It will be noted that Inspector Frazer examined the bank, and, relying on his lengthened experience in cases of a similar nature, came to the conclusion that this was an ordinary case of slight subsidence of the rails and washing away of the edges of the bank, due to the heavy rains.

This bank has never previously shown signs of being weak, or given any trouble, and the place had evidently not appeared to Mr. Middlemiss as a spot likely to require attention, as no reference is made to it in his report.

The material composing the bank consisted of a very fine powdery kind of soil, probably a decomposed gneiss, or schist of some kind, and was particularly well suited for taking in water; and my opinion is that, owing to the heavy rainfall in the district on the previous week to the accident, the bank had become thoroughly saturated with water between the old surface of the ground and the lower parts of the bank, causing the bottom layers to "spew" out when the engine of No. 15 Down passed over it on Saturday morning.

As to the remedy, it is proposed to deviate the railway about 40 feet into the side of the hill, construct a brick water-tight drain at the back of the bank, carry the present water-course for a distance of about 70 feet in a water-tight channel, thus preventing any leakage and run rubble drains into the bank to provide drainage for any water tending to collect in it.

The following is a table showing the rainfall at Diyatalawa between the 23rd and 30th ultimo:—

							Inches.
From 9.30 A.M.	22nd January	to 9.30 A.M.	23rd January	...	...		1·84
Do.	23rd	do.	24th	do.	...	...	—
Do.	24th	do.	25th	do.	...	...	—
Do.	25th	do.	26th	do.	...	...	0·71
Do.	26th	do.	27th	do.	...	...	3·63
Do.	27th	do.	28th	do.	...	...	1·16
Do.	28th	do.	29th	do.	...	...	1·19
Do.	29th	do.	30th	do.	...	...	0·14

12th February, 1904.

D. M. McMILLAN,
Engineer of Ways and Works.

---

(1) *Inspector Frazer's Statement.*

On Friday, the 29th, I trollied down the line from Pattipola, inspected the road, and found everything satisfactory, except on the bank at 158¾, where there was a slight crack on the outside edge.. I have had similar experience with other banks in wet weather, and did not consider this one serious. I informed the patrol, who was close to the place, to look after and report to the Foreman Platelayer if anything further happened. This bank has never given any trouble, and I put the subsidence down to the heavy rains.

---

(2) *Foreman Clifton's Statement.*

I was over my length on Thursday morning, 28th instant, but did not notice anything wrong with the bank at 158¾ miles. I trollied from Ohiya to Bandarawela, the day was very wet, and steady rain falling. On Thursday night I received a telegram from Inspector Frazer that a ballast train would run to 151·70 to one of the subsiding banks. On Friday morning I trollied from Ohiya to Haputale and joined the ballast train. We ran to 151·70, unloaded ballast, and returned to Haputale. At about 7.15 A.M. on the same morning I received a telegram from the Station Master, Bandarawela, saying bank had sunk a little at 159¾ miles. I came on to Bandarawela by ballast train on the engine and looked out at this mileage, but saw nothing wrong. I spoke to the Station Master at Bandarawela, and he asked me if anything was wrong at 159¾ miles. I told him I could see nothing wrong. Later on the overseer came to me and said the wrong mileage had been given to the Station Master, and that it should have been 158¾ miles. We loaded ballast train with ashes, and on going back to 151·70—still on the engine—I looked out at 158¾, but could see nothing wrong. Arrived at Haputale I spoke to Inspector Frazer, who was trollying down to Bandarawela, and asked him to look at the place on his way down. We unloaded ashes at 151 miles 70 chains and returned to Bandarawela. I looked out and saw patrol exhibiting green flag at 158¾.

I saw Inspector Frazer at Bandarawela, and he told me that he had examined the bank, and that there was nothing dangerous, but had placed patrol for safety. Next morning I had a telegram from Guard Barker stating seven wagons, one horse box, and third class bogie had gone down the bank.

---

(2) *Kangany Whyevery's Statement.*

The Patrol Davith Appu came to me on Friday and said there was a crack in the bank at 158¾, and to come and see it. I went and saw it. The crack was a small one on the outside of the bank, and the rails had gone down a little. I lifted the road and sent word to the station, and then went back to my work at another part of my length. On my way home I came and had a look at the bank, the road was all right, and the crack had not opened out.

I came next morning (Saturday) at 4.30, and along with the patrol examined the bank: the rails had not gone down, and the crack was not opened out. I then walked to Bandarawela and took the train to Haputale to be paid.

---

(4) *Patrol Davith Appu's Statement.*

Before Mr. Frazer arrived I noticed a slight crack on the outside of the bank, and I informed the kangany, who sent a cooly to the station. Mr. Frazer passed at about half past eleven, and instructed me to look after the bank. I stopped there until the last train had passed on Friday night.

I came next morning at about 4 A.M. because Mr. Frazer asked me to carefully look after the bank, but found no difference, the crack which had been filled up showed no signs of movement. I left the bank at 5.30 because I wished to catch the 6.40 train from Bandarawela to go to Haputale for my pay.

I got into the train near the brake van, and when going over the bank at 158¾ I felt a shock, and all the other coolies and myself were thrown about. The rails were a little down on Friday, and the kangany lifted them, but on Saturday morning they had not gone down.

Estimate No. 1,455 of the Expense necessary to be incurred for Probable Cost of proposed Improvements at Slip at 158¾ Miles, Bandarawela Extension.

Particulars.	Amount. Rs. c.	Total. Rs. c.
Excavation.		
7,000 cubic yards excavation in cuttings at 52 cents ...	—	3,640 0
Extension of Double Culvert by 30 feet.		
36 cubic yards excavation in foundations at 50 cents ...	18 0	
47 cubic yards masonry in cement at Rs. 18	846 0	
Rail covering	100 0	
		964 0
Permanent Way.		
Labour in laying temporary road	200 0	
Labour in laying permanent road	400 0	
100 new sleepers	525 0	
Ballast trains	550 0	
		1,675 0
Lined Channel for Water-course and Drain.		
23 lineal yards lined channel at Rs. 35	805 0	
180 cubic yards excavation in rubble drain at Rs. 2·50 ...	450 0	
180 cubic yards rubble at Re. 1·50	270 0	
		1,525 0
Drain at Back of Embankment 2 feet by 2 feet.		
210 cubic yards excavation at 40 cents	84 0	
30 cubic yards cement concrete 6 inches at Rs. 20 ...	600 0	
74 cubic yards brickwork at Rs. 15	1,010 0	
13 squares cement plastering at Rs. 8·75	113 75	
		1,807 75
		9,611 75
Contingencies ...	—	961 25
Total ...		10,573 0

XIII.—1904.

REPORTS

ON THE

PEARL FISHERY OF 1904.

Ordered by His Excellency the Governor to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 65 cents.

1904.

REPORTS ON THE PEARL FISHERY OF 1904.

No. 1.

The ACTING GOVERNMENT AGENT, Northern Province, to the Hon. the COLONIAL SECRETARY.

No. 284. Jaffna Kachcheri, June 13, 1904.

SIR,—I HAVE the honour to transmit my report on the recent Pearl Fishery, also Mr. Hornell's report.

2. It is not yet definitely possible to state the actual expenditure, but the receipt figures are correct, and it may be taken that the total receipts (exclusive of receipts and expenditure on postal accounts) are equivalent to Rs. 1,065,751·94. (See Annexure I.).

3. It is not yet possible to state the total expenditure, but I hope that it will not exceed Rs. 130,000.

4. If my estimate is correct, I think the nett results of the fishery should give to revenue Rs. 935,000.

5. I have included the cost of the maintenance of the "Ready" at the banks, of which I have not received detailed account, but which has been estimated at Rs. 27,000.

6. As the Postmaster-General has not yet furnished me with statements similar to those published in the report on last year's fishery, I have requested him to forward them to you direct.

7. I presume that you have already received from the Principal Civil Medical Officer a copy of Dr. Spittel's report on the medical arrangements at, and the health of, the fishery camp.*

I am, &c.,
J. P. LEWIS,
Acting Government Agent.

Enclosure in No. 1.

REPORT OF THE SUPERINTENDENT ON THE PEARL FISHERY OF 1904.

I.—SUMMARY OF RESULTS.

The Fishing Days.—The fishing commenced on the morning of the 15th March, and continued, with two intermissions due to bad weather from 7th to 9th April and 17th to 18th April, inclusive, until 23rd April. There were thirty-three fishing days, as against thirty-eight in 1903.

Amount realized by Sale.—The amount realized by the sale of the Government share of oysters was Rs. 1,054,694·78. This result puts the fishery of 1904 at the head of all fisheries held during the nineteenth and twentieth centuries. The following is the order in which the chief fisheries of that period come as regards the income derived by Government from them :—

	Rs.
(1) 1904	1,065,751†
(2) 1814	1,051,876‡
(3) 1891	963,748
(4) 1808	842,577
(5) 1903	829,348†

Banks fished.—The banks fished were the South-West Cheval Paar, which had been fished in 1855, but apparently never since§ until this year; the North-West Cheval Paar, which was fished in 1857, 1858, 1859, 1874, 1880, and lastly 1881; and the Mid-West Cheval, of the fishing of which I can find no record, at any rate under that name. The number of oysters fished was approximately—

South-West Cheval	31,943,888
North-West Cheval	4,321,132
Mid-West Cheval	2,771,610
Mid-West and South-West Cheval	2,002,455
	41,039,085‖

which may be compared with the estimates of the number of oysters on the banks, which was—

South-West Cheval	19,500,000
North-West Cheval	9,000,000
Mid-West Cheval	6,500,000
	35,000,000

The number fished in 1903 was 41,180,137.

---

* *Vide* pp. 45-

† Exclusive of postal revenue, which at these fisheries was considerable.

‡ In rixdollars 1,202,052. I have ascertained from the Secretariat that by Proclamation of 10th March, 1812, the sterling rate of the rixdollar was fixed at 1*s.* 9*d.*, and at this rate the value in rupees is as stated above.

§ The oysters on this bank that should have been fished in 1864 all disappeared.

‖ This includes oysters dredged and lifted by divers before the fishery began, amounting to 117,537.

II.—PRELIMINARY.

Owing to the personal interest taken by the Hon. the Lieutenant-Governor in the subject, and the pertinacity of Mr. Denham, the Assistant Government Agent, Mannar, who was not satisfied with the inspection of the banks made in November, and who persisted in the assertion of a belief that there were fishable oysters on them, a further inspection was made in the middle of December by Messrs. Denham and Hornell. The "Ready" was used for the purpose of the inspection, which was by order of Government carried out under the personal direction of Mr. Denham. 3,000 oysters were on 14th December lifted by the dredges on the "Ready" from the South-West Cheval, and a valuation of the pearls was made on 5th January, a copy of which is annexed (see Annexure II). It showed the pearls to be worth Rs. 26·67 per thousand. The valuation was made by the "Government valuers," two Moormen engaged for the purpose, and who had valued the samples lifted in October by Captain Legge.

This was considered sufficiently encouraging to warrant a further inspection of the banks, and Mr. Hornell proceeded to Colombo to arrange the preliminaries. On 25th January he was appointed Inspector of the Pearl Banks for 1904, "under the direction and in co-operation with the Government Agent, Northern Province, or his representative, the Assistant Government Agent, Mannar." He remained in Colombo for some weeks longer, superintending certain alterations which were necessary to fit out the "Ready" for the dredging experiments, which were to be carried out simultaneously with the inspection of the banks—for which, as at all other inspections, divers were to be employed. He arrived at Marichchikaddi on 20th February, and an inspection was at once begun of the South-West Cheval, with the result that Government was notified by telegram on 25th February that he estimated the quantity of oysters on the South-West Cheval at 13 millions: "all very good fishable oysters." This was considered to justify the holding of a "small open fishery," and preparations for this were immediately begun, and the heads of the different Departments concerned, viz., the Police, Postal, and Civil Medical Departments, notified to make arrangements similar to those made last year.

The following notice was published in the *Gazette* of 29th February, fixing a small fishery for the 14th March or thereabouts. It referred only to the South-West Cheval Paar :—

Pearl Fishery of 1904.

Notice is hereby given that a Pearl Fishery will take place at Marichchikaddi, in the Island of Ceylon, on or about 14th March, 1904.

The bank to be fished is the South-West Cheval Paar, which is estimated to contain 13,000,000 oysters.

2. It is notified that the first day's fishing will take place on the first favourable day after the 13th March.

3. Marichchikaddi is on the mainland, eight miles by sea south of Sillavaturai, and supplies of good water and provisions can be obtained there.

4. The fishery will be conducted on account of Government, and the oysters put up to sale in such lots as may be deemed expedient.

5. The arrangements of the fishery will be the same as have been usual on similar occasions. Persons attending the fishery camp from India will be permitted to travel to Ceylon by either of the following routes—(1) Tuticorin to Colombo, or (2) Paumben to Marichchikaddi—and by no other. Arrangements will be made, as at the last fishery, for travellers to proceed from Paumben direct to the camp. The only restriction imposed on travellers by the Paumben route will be inspection by the Medical Officer at Paumben.

6. All payments to be made in ready money in Ceylon currency.

7. Drafts on the banks in Colombo or bills on the Agents of this Government in India, at ten days' sight, will be taken, on letters of credit being produced to warrant the drawing of such drafts or bills.

8. For the convenience of purchasers, the Treasurer at Colombo and the different Government Agents of Provinces will be authorized to receive cash deposits from parties intending to become purchasers, and receipts of these officers will be taken in payment of any sums due on account of the fishery.

9. No deposit will be received for a less sum than Rs. 250.

By His Excellency's command,
EVERARD IM THURN,
Colonial Secretary.

Colonial Secretary's Office,
Colombo, February 27, 1904.

Inspections of the North-West and Mid-West Chevals followed, resulting in estimates of 9,000,000 oysters on the former and 6,500,000 on the latter paar. A further inspection of the South-West Cheval added another 6½ millions oysters to the number at first estimated. The final estimate, therefore, stood thus :—

	Millions.
South-West Cheval	19½
North-West Cheval	9
Mid-West Cheval	6½
Total ...	35

It was calculated before the discovery of the additional 6½ millions on the South-West that the fishery would last twenty-eight days with 100 boats working daily; but the additional find of 6½ millions made it probable that the duration of the fishery would be somewhat longer, and the restriction of the number of boats to 100 was consequently removed.

I received a telegram informing me of the result of the February inspection and of the decision of Government to hold a fishery on the 28th February while on circuit at Puneryn. I immediately hurried back to Jaffna to arrange for all preparations necessary to be made there in the way of

appointment of the Kachcheri and kottu staffs, the providing of a police force and sanitation coolies for the camp, and the despatch of furniture and stores. These were hurried on, for every day was of value, and on 7th March I left myself for Marichchikaddi by boat, arriving there on the evening of the 8th. An advance of Rs. 10,000 had meanwhile been obtained from Government for current expenses.

Notifications.—The necessary Proclamations for the establishment of a court, jail, port, police, post and telegraph offices, hospitals, &c., at Marichchikaddi and for the constitution of the port of Pukkulam were issued in due course by Government.

III.—Valuation of Samples.

On 8th March the washing of the oysters lifted from three banks which it was decided to fish was completed and the pearls valued. I append an abstract of the results of the valuation :—

Abstract of Valuation referred to.

Name of Paar.	Number of Oysters fished.	Weight and Valuation of Pearls found.				Valuation per 1,000 Oysters.	
		Kalangey.	Manjady.	Rs.	c.	Rs.	c.
South-West Cheval ...	12,000 ...	6 ...	12¼ ...	432	14 ...	36	1
North-West Cheval ...	7,200 ...	2 ...	18 ...	243	0 ...	33	75
Mid-West Cheval ...	6,000 ...	2 ...	1⅛ ...	121	50 ...	20	25

These were very satisfactory with Rs. 36·01 a 1,000 as the valuation of the South-West Cheval oysters, and the North-West Cheval running it close with Rs. 33·75. The highest valuation at the fishery of 1903 was Rs. 25 for the North-East Cheval, and the lowest Rs. 19·27 for the South-East. Our lowest valuation was Rs. 20·25 for the Mid-West. The valuation statements were published in the *Gazette*, and copies of them were printed as soon as possible and distributed among the pearl merchants at the camp. Copies are annexed. (See Annexure, V., VI., and VII. to Mr. Hornell's report.)

Appointment of Staff.

Following precedent, I was, as Acting Government Agent, Northern Province, appointed Superintendent of the Fishery, and I had the advantage of having as my assistants Messrs. Denham and Horsburgh, both of whom had had experience of former fisheries. Mr. Denham again assisted generally in the work of the camp, and was also Police Magistrate and in immediate charge of the police. His services in these capacities were invaluable, and the opportune return from leave of Mr. Horsburgh just before the opening of the fishery fortunately enabled Government to utilize his experience again in the office of Superintendent of the Kottu, an office which he had held at the fisheries of 1891 and 1903, and which it was very desirable should be filled by an officer of experience. Mr. R. G. Saunders was appointed to assist him in the kottu, and was useful also at the Kachcheri and in court work.

Appointments of the kottu staff, boat guards, &c., were made at Jaffna to the number of two-thirds of those required before my departure for the fishery, the remaining one-third reserved for Mannar were made at Marichchikaddi by Mr. Denham. The Beach Master of last year M. Muttutamby was re-appointed, and he had the same assistants, with the addition of a third assistant beach master.

The Kachcheri staff consisted of the Head Clerk of the Jaffna Kachcheri Mr. J. Toussaint acting as Head Clerk, with Mr. J. G. de Niese of the Road Committee acting as second clerk, and two shroffs, Messrs. Kanthappa, Treasury Officer of Vavuniya, and Vettivelu, Irrigation Adigar, Mannar, two counters, and two peons. The appointments of two shroffs was considered to be necessary in view of the heavy work at the Treasury occasioned by the paying in simultaneously of large sums of money by the numerous purchasers of oysters, and experience showed that it was justified. The Kachcheri Interpreters of Jaffna, Mr. S. Sabaratnam, and Mannar, Mr. S. Muttutamby, were found very useful in the duties assigned to them at the camp. The Kachcheri Arachchi of Jaffna acted as Pass Receiver at the kottu, and the old Mannar peon Mayilvaganam, who, like the Arachchi, had been at many fisheries, was in charge of the kottu and its stores. In making appointments preference was given as far as possible to officers who had been at the last fishery or former fisheries.

I did not feel willing to take the responsibility of doing away with boat guards altogether at the fishery, though this course was recommended by Mr. Ievers in his report on the fishery of 1903. It would practically have meant leaving the boats without any check whatever on the divers and the opening of oysters. The check may be a bad one, but it is a question whether it is not better than none at all.

V.—Camp Buildings.

In view of the probability of the occurrence of a Pearl Fishery in 1904 the camp buildings of 1903 were allowed to remain standing. A storekeeper and five coolies were appointed to look after such furniture and stores as it was considered desirable to retain there, and also as far as possible the camp buildings, to prevent theft of cadjans, &c. But when I visited the camp in October all that was left of most of the buildings was the framework, the cadjans had practically all disappeared. The strong winds of the south-west monsoon had played havoc with them. The only exceptions were the Kachcheri and the Treasury which had been continuously in the occupation of the store-keeper, the store itself and the lines occupied by the store coolies, the Government kottu, the dispensary and dispenser's quarters, and the Adigar's house. The camp had virtually to be re-cleared and re-built, and this not with two or three months' time to do it in, but in as many weeks. The holding of a fishery was decided on 25th February, and the fishery was advertised to begin on or about 14th March. On 26th February the Assistant Government Agent was authorized to start the buildings, and the work was begun by the Adigar of Musali. He reported that he feared it would be impossible for him to be ready with them before 21st March, but by the date of the commencement of the fishery on 15th March all the most important buildings were ready for occupation. The Adigar and his hardworking lieutenant, the venerable Udaiyar of Musali North, the architect of the camp, deserve great credit for the strenuous exertions they made to finish the work in time. The cost of clearing the camp and erecting the buildings was Rs. 24,278·48, as against Rs. 32,596·75 last year, the reduced cost being due to the utilization of such of the materials of the old camp as were

found to be fit for use again. From this should be deducted the sum of Rs. 1,334·69 cost of buildings erected for Mr. Dixon and his staff, so that the actual cost of camp buildings was under Rs. 23,000. There was no time for the preparation of an estimate, as the buildings had to be started at once.

Most of the cadjans were obtained from Kalpentyn and Mannar, the remainder and the mats used for the floor from Jaffna.

Some changes were made in the sites of the buildings in accordance with instructions left by Mr. Ievers, but with some slight modifications. The house for the Superintendent of the Fishery was this year on the highest part of the cliff facing the sea in a line with the quarters of the Kottu Superintendent and clerks, where the court-house stood last year. The Superintendent was fortunate as this is the finest site in the camp. The site which was occupied by the Superintendent's house last year was used for the quarters for the Governor. The court-house and sale bungalow which was on top of the cliff last year was placed this year on the side of the road opposite the Assistant Government Agent's quarters, a very convenient position for both purposes.

A house for Mr. Dixon was erected just behind the Superintendent's, but after the visit of the Lieutenant-Governor he removed into the empty "Governor's quarters," and his house was handed over to his assistant.

The resthouse adjoined the Governor's quarters running inland from them at an angle. The Medical Officer's quarters were between the resthouse and the court-house.

The site of the fish market also was changed to a position just south of the kottu.

The other buildings were erected on the old sites. It is hoped that the site of the Governor's quarters will eventually be occupied by a new permanent resthouse, which will certainly have one of the finest prospect of any resthouse in Ceylon, looking across the mouth of the Modragam-aru to Kutiramalai.

The kottu had remained almost intact, and all that was necessary was the strengthening and repair of the fence in some places. At the north-west corner it had to be set back a little owing to the encroachment of the sea. The approaches to the gates on the seaside, which were at the last fishery very steep and difficult for the divers carrying heavy loads of oysters on their heads from the boats, were terraced by means of logs of timber pegged into the sand. There was no time to carry out the enlargement of the kottu suggested by Mr. Ievers. Its capacity was tested to the utmost on the night of 2nd April, when 2,609,565 oysters were stored in it. An additional guard-room for counters was added on the north side.

VI.—Progress of the Fishery.

A number of Arab divers having arrived, it was decided to begin the fishery with them on 15th March. The weather was perfect fishing weather with its alternate land and sea breezes, but there was no telling when it might not break up, and there was no time to be lost.

Accordingly at midnight on the 14th the gun was fired as a signal to the divers, and 12 Jaffna and Colombo boats got away to the South-West Cheval in the small hours with 313 Arab divers, manducks, &c., on board. They brought in splendid loads of oysters all neatly tied up in bags. The Government share was 182,490, an average of 22,811 a boat. The excellent appearance of the oysters was a subject of general remark, and the result was that very good prices were obtained at the sale, ranging from Rs. 49 to Rs. 80 per thousand with an average of Rs. 50·90.

The number of boats that went out to the bank increased next day to 30, and this day again they were manned by Arab divers with a few Jaffna men. On the third day it reached 45, on the fourth 90, and on the fifth 149. The Kilakarai boats had begun arriving on 17th March, and by 20th March the whole of them, 95* in number, had arrived. The boats that took part in the fishing consequently increased by the 21st to 192.

On the 26th the number 202 was reached, and from that date until the 31st it was 202 or 201 boats daily. It varied in fact from 198 to 202 from 23rd March to 5th April, the day before the fishing was temporarily stopped by the weather.†

The largest take was on 2nd April, when the enormous quantity of nearly 4,000,000 oysters was brought in. The Government share was 2,604,020. This beats the record for one day's fishing at any fishery that I know of, the largest quantity fished on one day at last year's fishery, which was itself supposed to be a record, being about 2,800,000. In consequence, however, of the immaturity of the oysters which made up this large take, it was decided to make a move to the North-West Cheval.

There was a change in the weather at the end of March, the south-west breeze became stronger and the wind off the land more uncertain. The number of boats dropped from 202 on 5th April to 13 the following day, which showed how unfavourable the weather had by that time become. On 7th, 8th, and 9th there was no fishing, as there was a continuous and strong south-west breeze, but on 10th it was resumed with 169 boats and went on uninterruptedly till the 16th. On the 12th owing to the difficulty of fishing the North-West Cheval, which occupies a less sheltered position than the South-West and is a considerable distance further from land, the oysters on it also being much more scattered; it was decided to move to the Mid-West Cheval, But after three days of fishing on this bank, the South-West Cheval, as the easiest fished of any of the three banks, was reverted to. On the 15th the number of boats that reached the banks was only 30 out of 101 that started, though 70 managed to get out the next day. The weather, with an almost continuous south-west wind, was again unfavourable for sailing to the banks, and it looked as if there was an end of the fishery. Mr. Hornell had come ashore, and I decided after consultation with him and Mr. Denham to try the experiment of sending out some of the Arab divers, who could not get boats to take them out, but who were willing and anxious to go on diving, in the "Ready" and in the "Serendib," which were for the nonce to be converted into divers' boats. Each steamer was prepared to take from 20 to 25 divers with their attendants, and on 19th April the experiment was tried with 44 divers in the "Ready" and the "Serendib." Mr. Hornell superintended operations from the latter steamer. The 18,875 oysters they brought ashore fetched very good prices, from Rs. 68 to Rs. 72 per 1,000, and their example evidently inspired the other divers with admiration, for they were cheered as they entered the kottu. With a slight slackening off of the continuous south-west next day 23 boats ventured to go out. I also sent out a contingent of Arab divers in the "Serendib." The action taken on the 19th in fact saved the situation

* Ninety-six Kilakarai boats left that port, but one was not a diving boat.

† See Customs Returns of Boats arriving (Annexure III.)

and enabled the fishery to be carried on until 23rd April, on which day some of the Kilakarai divers, persuaded by their chief the well-known Kidaru Nena, took part in the fishing. On this the thirty-third and last day of the fishing it was resolved to utilize the services of the Government divers who were remaining idle in the camp, and a boat load of them towed by the "Serendib" added 4,455 oysters to the 102,280 Government share brought in by the 11 Kilakarai and Arab boats that went out.

This resumption of the fishing was the means of adding Rs. 17,896·77 in five days to the proceeds of the fishery and of enabling us to beat the record of 1814, on the proceeds of the sale of oysters alone. It was carried out without incurring any expenses that would not in any case have been incurred, as the kottu staff had been paid their wages up to the end of the month.

The largest boat load of oysters brought in was 37,675 on 23rd March by one of the capacious Tuticorin boats. This beats the highest number reached by the "Ready" by dredging, which was 31,504 on 16th March. Other boat loads were 32,878 on 13th April, on which day, the last on which there was any dredging, the "Ready's" catch was 3,705, and 32,530 on 16th April, when it was too rough for any dredging.

The following statement shows the number of days spent on the fishing of each bank :—

	Days.
South-West Cheval	25
North-West Cheval	5
Mid-West Cheval	3*

*On the last of the three days the fishing seems to have been partly on the Mid-West and partly on the South-West.

I should have been glad to return to the North-West Cheval, the oysters on which had been found to be very satisfactory, towards the end of the fishery, but the weather was too boisterous to permit of it.

VII.—Boats and Divers.

The number of divers' boats registered was 204.* The following summary shows the places to which they and the divers in each boat belonged :—

Place to which Boat belongs.	Boats.	Place to which Divers and Manducks belong.	Divers.	Manducks.
Colombo ...	5	Arabs	233	223
Jaffna	25	Jaffna	128	136
Mannar	1	Mannar	12	12
Erukkalampiddi	9	Erukkalampiddi	166	153
Kilakarai	95	Kilakarai	1,427	1,415
Tondi	2	Tondi	24	24
Vempur	2	Vempur	26	25
Davipatam	1	Devipatam	15	15
Tuticorin	18	Tuticorin	498	489
Paumben	46	Paumben and Kilakarai ...	490	487
Naripur	—	Naripur	30	30
Total ...	204	Total	3,049	3,009

Thirty of the Paumben boats were manned with Kilakarai divers, the exact number of whom was not reported. The Naripur men worked in Kilakarai boats. The three Muttupat boats of three masts referred to by Mr. Hornell, which I also noticed, were apparently included in the Kilakarai list.

The number of divers (3,049) was nearly a thousand less than the number that attended the fishery of 1903, which, according to the table annexed to Mr. Ievers's report, p. 15, was 3,992.

The Kilakarai, Tondi, &c., divers are all Moormen, and so are the divers of Erukkalampiddi. The Tuticorin men are all of Parawa caste.

The Jaffna divers consist of men of the fisher caste from Karaiyur in Jaffna, Mukkuvas from Nainativu and Mandativu, and Moormen from Vannarponnai. The last-named are the descendants of Arab divers who settled at Jaffna fifty or sixty years ago and intermarried with the Moor people of the place. All these men are usually employed in fishing for chanks and bêche-de-mer.

According to the Assistant Agent the Mannar divers comprised, besides the Erukkalampiddi men, 8 men from Chavalkaddu, 4 from Arippu, and 2 from Uppukulam, but the summary only accounts for 12 divers from other villages than Erukkalampiddi. The two omitted may have been classed with the divers from that village.

It will be seen from this table that the Kilakarai divers are the backbone of the fishery.†

Mr. Hornell has described the various types of boats. The Tuticorin boats made up in size for the smallness of their number.‡ The largest boat at the fishery was a Tuticorin boat No. 167 (pearl fishery number), which carried 34 divers and 33 manducks; the smallest a Paumben boat No. 193, and, Erukkalampiddi boat No. 133, each of which carried 7 divers and 7 manducks.

The arrangement of the fleet in two or more divisions which had been the practice at some fisheries§ was not followed at this fishery. Instead the precedent of 1889, 1890, and 1891, when the number of boats that took part in the fishing was nearly the same as in 1904, was followed.‖ It was feared that owing to the late date on which the fishery was begun weather favourable for fishing might not last long, and owing to the short notice given it was not supposed that there would be a large number of boats at the fishery, or at any rate not too large a number for all to work together. Time was valuable, and every available boat was required.

* A list of them is annexed (Annexure IV.).

† The number of Kilakarai boats was in 1889, 114; in 1890, 102; in 1891, 77; and in 1903, 150.

‡ Tuticorin boats numbered 36 in 1890, 17 in 1891, and 34 in 1903.

§ In 1874 the boats were arranged in three divisions: the read, blue, and green with 50 boats in each, but on some days boats of all three divisions went out. At the fisheries of 1879 and 1881 there were two divisions: the red and the blue; and also at the fisheries of 1880 and 1903: the red and the white.

‖ The number of boats in 1889 was 194; in 1890, 230; and in 1891, 214.

There are always on a diving boat, in addition to the tindal and the divers and manducks, of whom there are two of each to each stone, a samátti (which is supposed to be a contraction of sámän vattai), who is the representative of the owner, and a todai, whose duty it is to attend to the baling of the boat, an important function, and to take charge of the food and drinking water.

The custom is general among all classes of divers that each diver gives one dive of oysters per day to the samatti, tindal, and todai, respectively, *i.e.*, they each receive two divings from each stone.* Their shares are given to them in the boat, and they hand over the Government share in the kottu themselves and retain the balance.

The divers' share of the oysters are divided as follows :—†

(1). *By Erukkalampiddi Men.*—One-sixth of the oysters for hire of boat; one-third of the balance to manducks and two-thirds to divers.

(2) *Tuticorin Men.*—One-fifth of the oysters for hire of boat; one-third of the balance to manducks and two-thirds to divers.

(3) *Arabs (from India).*—Same as Tuticorin men.

(4) *Arabs (who are settled in Ceylon).*—For boat hire each diver gives Re. 1·50 per day. The oysters are divided then as follows :—Two-thirds to divers and one-third to manducks.

(5) *Kilakarai Men.*—One-fifth or one-sixth, according to arrangement, for boat hire; one-third of the balance to manducks and two-thirds to divers.

Thus, if an Indian, Arab, or Tuticorin boat brings in 10,000 oysters, divers' shares will at Rs. 50 per 1,000 fetch Rs. 500 :—

	Rs.	c.
One-fifth for boat	100	0
One-third of balance to manducks	133	33
Two-thirds to divers	266	67

I may add that in some cases the Arab divers at this fishery hired boats from the owners for fixed sums of money, such as Rs. 250 or Rs. 230 for use of the boat during the fishery, without any handing over to them of shares of the oysters, and that in the Kilakarai boats each diver gave one dive for the Kilakarai mosque, in addition to the dives given to the samatti, tindal, and todai.

VIII.—Arab Divers.

It was decided at this fishery to allow a limited number of Arab divers to take part in it. Their excellence as divers was known, and it was found at the fishery of 1903 that they were easily managed. The number to which they were to be restricted was at first fixed at 150, but before this intention could be given effect to a larger number had already arrived, some from Jaffna where they work as chank divers, some from Colombo, and some from Paumben. Some were men who had been working on the Ceylon coasts for years, and some were newly arrived from Bahrein and Koyit. The number reached over 230 in a few days and eventually, according to the Beach Master's return,‡ 258 with 32 manducks of the same race (the others they obtained at the fishery). As the fishery progressed and the advantage of having them had become apparent, I was prepared to take more, but no others came either from Colombo or Paumben.

They gave very little trouble, and were very useful both for the starting of the fishing and for keeping it going towards the end. They were always most keen on going out, no matter what the weather was, and they rather roughly handled a Jaffna tindal who started for the fishing one morning but turned back because his sail split. They offered to mend it for him, but he said he had no materials. Their indignation was great, and they were loud in their complaints. They are as used to handling boats as they are to diving, and had great contempt for tindals who were deterred from proceeding to the banks owing to small accidents to their boat or gear.

Their chief characteristic is perhaps their persistency in trying to get their own way—a characteristic which under certain circumstances might be found a very awkward one. On the last day of the fishery they besieged the British India Office for tickets with handfuls of rupees in their hands, and 120 of them practically took charge of the British India boat, which was waiting to convey them to the steamer, overcrowding it by more than half the number it was supposed to carry. It would not have been a matter of much consequence to them if it had capsized, but they got safely out to the steamer, and I must confess I was glad to see the last of them, for they had had nothing to do for some days. During the fishery some of them spent their evenings drinking beer at a restaurant, and apparently retailing to the manager strange stories of the daily depredations of sharks, I cannot otherwise account for the gruesome but imaginary description of this "the other side of the fishery," which formed the subject of a prominent and portentous communication to a local paper.

Fortunately at this fishery everything went well, and the Arabs were in good humour and had no occasion to come into conflict with the police.

A larger number might be employed at the next fishery, but there must always be a police force sufficiently large to deal with them. Sir William Twynam in his report for 1891 puts the limit that should be allowed at a fishery at 300.

IX.—Arrangements at the Banks.

Mr. Hornell took up his headquarters on the barque "Mohideen Bux," and had the launch "Nellie" and four inspection boats at his disposal for superintending the fishing. The "Ready" at first and the "Serendib" later towed the barque from one point to another on the banks when required. She came in from the banks on 21st April and anchored off Marichchikaddi. The "Serendib" and the "Nellie" accompanied the boats out to the banks daily in the morning and returned with them in the afternoon, and were useful in towing drifting or dilatory boats, as was also the "Ready." The "Serendib" on 12th April spent some hours in searching for a boat that capsized on its return journey owing to a collision with another boat, but without success.

* These shares were made compulsory on divers by Government regulations published in 1855. (See Report on Pearl Fishery of 1880, Sessional Papers, 1880, No. XV. p. 119.)

† From notes supplied to me by Mr. Denham.

‡ Copy annexed (Annexure VI.). The figures in this return differ rather from those in Annexure V.

X.—THE DREDGING.

Mr. Hornell has fully reported on the dredging operations carried on by the "Ready." The result, whatever the cause may be, cannot be considered satisfactory. I have already compared the work done by the "Ready" in a day with that of some of the diving boats, and the comparison was not to the advantage of the steamer. She was under his personal control until after the visit of the Lieutenant-Governor during the Easter holidays (April 1st to 4th), but after that date she was transferred by the Lieutenant-Governor's orders to that of Mr. Dixon.

But the weather from 5th to 11th April was too rough to allow of any dredging, and she only managed to do three days more of it, viz., on the 11th, 12th, and 13th when the catches were 9,680, 1,460, 3,705 respectively, and when she was on 15th April re-transferred to Mr. Hornell for the purpose of transplanting spat the weather was again too rough for either dredging or transplanting.

Personally I do not think dredging can ever take the place of diving at the pearl fisheries either wholly or in part as recommended by Professor Herdman. It is in the first place a less intelligent method of taking up oysters from the bottom of the sea. The dredges grope blindly along the bottom bringing up, with impartial sweep, oysters, pebbles, and the marine biological specimens that delight the heart of the scientist. For them to perform this operation satisfactorily it is necessary that the bottom should be even and sandy. Divers, on the other hand, see where they are going and pick up what is wanted, which, where the objects of their quest are such valuable assets as pearl oysters, is a consideration worth taking into account. In the cold seas that surround the British coasts cheap diving (by which I mean the use of divers who do not require the expensive apparatus of diving dresses, &c.) such as is practised in tropical seas is impossible. Hence dredging is a necessity. But I doubt whether if oysters could be got up from those seas in the cheap and ready method which we have hitherto made use of at the pearl fisheries,* dredging would have been resorted to there either, at any rate unless the conditions for carrying it on were entirely favourable.

It may, however, be useful, as pointed out by Mr. Hornell, for scientific purposes, such as transplanting spat and for inspections of the banks. I suppose, too, that it might be used with advantage in waters too deep for divers to work in.

XI.—SALE OF OYSTERS.

I reverted to the practice followed at the fisheries before that of 1903 of holding the sales at or soon after sunset. I wished to avoid selling the oysters so late as 9 P.M., as the late hours which this practice involved were found very trying by the Kachcheri staff who were kept working past midnight. I was glad to find at the first sale I held that the Chetties and other merchants were all in favour of holding the sales at 6 o'clock or sunset. They themselves asked me to make the change which I had already resolved on. The only objectors were a few Mohammedan petty traders, who wished them to be held not at 9 but at 8 P.M., and only four persons held up their hands against the proposal to hold them at sunset. I found no difficulty in holding them at this time. It is true that I often had to close the sales before I had received the account from the kottu of the number of the Government share, but I always had an idea what the number was likely to be and I sold up to this number, and then the balance, if any, and whatever it might be. If the actual number fell short of the number estimated, the last few bidders in excess got no oysters, and for this contingency they were quite prepared, as they were told at the sale that it might occur. Sometimes the number sold fell short of the actual number. The last bidder then as a rule took the balance, which was sometimes small and sometimes large. If it was larger than he wanted additional bids were taken the next morning at the last price reached. This was the practice followed by Sir William Twynam, and he assured me that it never caused any difficulty. My experience of it was the same. What rendered it possible to carry it out was the mode of auction which has always been followed at the sales. This differs in some respects from the procedure of an ordinary auction, and it should perhaps be explained.

The actual or approximate number of oysters is announced, the sample of pearls from the paar from which they have been fished is passed round, and a bid is asked for. Some one immediately says "Rs. 20" or whatever it may be, the amount depending on what the merchants have heard or seen of the divers' shares of the oysters and the pearls, or on their own or others' experience of the oysters from this paar. The price then rapidly runs up (this was usually the case at this fishery), and the last bidder was generally a small purchaser, and therefore did not mind bidding up to a price which the larger buyers considered too high for large purchases. He would take, say, 2,000, but no one else wanted any oysters at this price. The people were then asked to make another offer. The price that had been first reached was, say, Rs. 60, but some one immediately said Rs. 20 perhaps, and the bidding would then start again at this price. It eventually reaches, say, Rs. 50, or whatever the price was to which the large buyers had decided that they would go. There are then no more bids (unless some reckless small purchaser again sends the price up higher than the large buyers wanted), in which case the process already described is repeated. But if this does not happen the Chetties and Moor merchants all begin to shout out the number of oysters they want, 50,000, 100,000, 10,000, and so on, and the Superintendent is kept busy taking down the names of the buyers and the quantities they require as hard as he can, until all the would-be purchasers have had their bids recorded. If there are very many of these and they are competing eagerly to have their names taken down, the oysters are put up again and sometimes reach a higher price, which the merchants who have not been able to get their names taken down would rather pay than lose the chance of getting any oysters.

Sometimes the sale has run out in this fashion; it was found that the bids had exhausted the balance of oysters.

The sales went off with much élan during the whole fishery, with one or two exceptions when the oysters were disappointing. There was much clamour and excitement, and the half walls of the court-house, beyond which the merchants were not supposed to come, the centre portion being reserved for the officials, more than once bent in and gave way under the pressure of numbers of excited Chetties and Moormen. The exceptions referred to were on 28th March and on 2nd and 3rd April, on which latter date the prices dropped to Rs. 12 a thousand—the lowest price at which any oysters were sold

* On the merits of the diving system as practised at the Ceylon fisheries reference should be made to Sir William Twynam's "Report of the Ceylon Pearl Fisheries" (Sessional Papers of 1899, p. 17).

during the fishery. The complaint on both occasions was that the oysters were immature; on 2nd April it was fully justified, and I was fortunate in being able to get rid of the 2,609,565 oysters in two days at an average price of Rs. 14·96.

At this fishery bids were taken in rupees only, not in half rupees.

The highest price reached at the sales was Rs. 80 on the first day of the sale, when the oysters were from the South-West Cheval, and again on the twenty-first day (April 6), when they came from the North-West Cheval. The lowest was Rs. 12 on 2nd April also for South-West Cheval oysters. The reason for low bids on this day has been explained. The highest average was reached on 6th April with Rs. 71·28, the lowest was Rs. 14·96 on 2nd and 3rd April. The average for the whole fishery was Rs. 38·39 per thousand. These prices compare very favourably with those at last year's fishery, when the prices ranged from Rs. 10 to Rs. 51·50 with an average of Rs. 29·72 for the whole fishery.

The halcyon days of the fishery were from 19th March to 23rd March, when the following were the amounts realized :—

		Rs. c.
March	19	60,758 70
„	20	59,269 45
„	21	60,766 31
„	22	65,271 20
„	23	66,541 20

i.e., over 3 lacs of rupees in five days. The next two days added Rs. 81,360·50 and on 26th March Rs. 57,978·34, making over 4½ lacs in a week more than either of the fisheries of 1880, 1881, 1887, and 1890 realized, and nearly as much as the amount realized in 1889.

April 4 was also a very good day with Rs. 65,328·78, coming second in the record of 1904.

On every one of these days for which I have given the figures the highest record of 1903, viz., Rs. 48,256·84 which was itself supposed to be a record, was beaten.

The following is a statement of the average price per thousand at the fisheries of the last thirty years.*

1874	79·07	1890	18·47
1880	7·66	1891	36·59
1881	32·85	1903	29·72
1887	19·19	1904	38·39
1889	19·15		

It will be seen that the average of 1904 was higher than that of any fishery since 1874. The 1874 average was more than double that of 1904, but the number of oysters sold was very small, only 101,199. The highest bid was Rs. 210 a thousand. The purchasers were chiefly Sinhalese traders of Colombo, Negombo, &c. There were very few Indian buyers.

But even 1874 is only a bad second to 1860, when the average was Rs. 134·23, the number of oysters sold being 2,732,623. This is the highest average on record of any fishery. The highest figure reached was Rs. 180 a thousand.†

The total quantity of oysters sold at this fishery was remarkably near the number sold in 1903. In 1903 it was 27,446,425, in 1904 27,470,410, an excess of 23,985. But there was a remarkable difference in the amounts realized, that of 1904 exceeding that of 1903 by Rs. 238,218.‡

XII.—Indian Notes and Money Market.

It will be seen from this account of the sales that the fishery may be said to depend entirely on the attendance of Indian pearl merchants. It was for this reason and to give them every facility for making purchases that I recommended to Government that Indian notes should be accepted without charging any commission. This had always been the practice at former fisheries, though a clause was regularly inserted in the advertisement of every fishery that "all payments are to be made in Ceylon ready money," and as regularly in practice ignored. But at last year's fishery Indian currency notes were only accepted at ½ per cent. discount on all payments made into the Kachcheri on account of value of oysters purchased. I had ascertained that this charge was the cause of much dissatisfaction on the part of the Indian merchants, and I accordingly recommended to Government that at this fishery the discount be dispensed with, and that all Indian notes be accepted at their full value. The small revenue derived from this source in 1903, viz., Rs. 1,445·14, was hardly worth what it cost in giving the Indian merchants occasion for grumbling and dissatisfaction with the fishery arrangements. This source of revenue was a new one, which had not been thought of until last year, and their objection to it was the greater on that account.

It is true that the Treasurer had to pay Rs. 485·08 last year for cashing at the Banks Indian notes received at the fishery, but there was reason to believe that this might have been avoided if they had been retained till the end of the fishery, when most of them could probably have been disposed of by issuing them to such Indian merchants as were then in want of Indian notes. Further, if any remained, they could have been sent to Colombo and Jaffna and there disposed of in the same way without any loss on them. There is a demand at both places at this time of the year for Indian notes, by native traders who have to make remittances to India.

In reply Government informed me that the matter was left to my discretion. Of Rs. 233,200 paid in Indian notes Rs. 176,100 was remitted to Colombo and Rs. 57,000 to Jaffna, and at the close of the fishery all Indian notes received since the last remittances were sent had been disposed of (except one Madras note of Rs. 100). The notes sent to Jaffna were disposed of at once, but those remitted to Colombo were, I believe, as before, immediately sent to the bank.

Dispensing with the charge for discount had an excellent effect on the money market of the camp. Money flowed in freely from India, and the Indian merchants felt quite at home with their paper money accepted at its full value. It was perhaps sentiment more than financial considerations,

* I have omitted 1879, as part of the oysters at this fishery were washed and the pearls sold.

† The late Mr. A. M. Ferguson says, "In my time in Ceylon oysters have been sold from Rs. 8 to £18 per 1,000. £18 was given for oysters in the time of Sir Henry Ward, and I do not know of any higher figure." (Address at Conversazione of Royal Asiatic Society, Ceylon Branch, 1887. Royal Asiatic Society's Proceedings, 1887-1888, p. 18). I have not found any higher figure than Rs. 180 at this fishery of 1860, at which higher prices were given than at any other fishery in Sir Henry Ward's time. Rs. 180 in 1860 was £18 and Rs. 210 in 1874, equivalent at least to £21. I have not been able to ascertain what the rate of exchange was in these years, but think it likely that the rupee was worth more than 2*s*.

‡ See Annexures VI., VII., and VIII.

which actuated them, as well as the petty annoyance of always having to pay something more than their purchases nominally required; but there is no doubt that the abolition of the discount helped to put them in a good humour, and after all that the Indian merchants at a pearl fishery should be in a good humour is a matter of some importance.

For the same reason, at the request of the Chetties I asked Government to arrange with the Madras Government to authorize the collectors at Madura and Negapatam to accept deposits to the credit of the Ceylon Government on account of the purchase of oysters, and at the same time to advise the Treasurer by telegram of such deposit and the name of the depositor, who was to pay the cost of the telegram.

It occurred to me at one of the sales that the bidding would have been brisker but for the fact that some of the Chetties had not sufficient money in hand to pay for large quantities of oysters.

This suggestion was carried out, though a fortnight or so after the fishery had begun, and between 7th April to 19th April a sum of Rs. 58,100 was deposited at the Madura Kachcheri on behalf of Chetties purchasing oysters at the fishery. Had the arrangement been made at the beginning of the fishery the privilege would have been availed of to a much greater extent by the Indian merchants. It was found a great convenience by those of them who went in for large operations in buying oysters, and no doubt was one of the elements that contributed to the success of the sales towards the end of the fishery. Next year and at future fisheries similar arrangements should be completed before the fishing begins and notified in the advertisement of the fishery. The number of Kachcheries at which deposits may be made might be extended to include Bombay, Madras, Trichinopoly, Tinneveli, Ramnad, and Kumbakonum, and possibly some others.

Indian merchants bring large sums of money with them to the fishery and run a considerable amount of risk in having such sums about them in their cadjan huts. Any expedient that reduces this risk is to be welcomed.

Bank credits are not popular among the merchants of Southern India, though they were made use of in one or two instances by Bombay merchants. The discount that has to be paid and the prospective loss of interest which the delay in drawing the money involves are the obstacles to their freer use. Nothing is more obnoxious to a Chetty, who will spend lacs of rupees in speculating in oysters, than to have to pay discount for accommodation of this kind or for the cashing of cheques. Add to this the facts that there are many towns in India where, though there are Kachcheries, there are no banks, and that it takes a shorter time to deposit money in a Government Treasury in India and to get it credited at the Kachcheri at Marichchikaddi than it does for the same process to be followed with regard to an Indian Bank credit.

Merchants were given the usual facilities for depositing cash at the different Kachcheries in the Island against their purchases.

XIII.—Merchants and Traders.

The merchants who bid at the sales were, as usual, chiefly from Southern India, and they purchased 24,911,983 of the 27,470,210 oysters sold. Ceylon took only 2,376,227, a London pearl merchant 160,000, and Mecca 22,000.

The largest purchasers were the Chetties from Madura, Ramnad, Parambaikudi, Paumben, Pandikudi, Kumbakonum, and next to them the Moormen of Kilakarai, Adirampattam, Tondi, Kayalpattam, &c., and the "Nadans" or Chánár caste people of Kamuti, Mulaipuli, Perunali, Valaiyadi, Kánum, &c. The Chetty and Mohammedan traders of Trichinopoly took over a million. Altogether nearly 90 towns and villages of the Madras Presidency were represented at the sales, and so also were other towns of India, such as Calcutta (with only 1,000), Bombay (over 270,000), and Secunderabad (60,000).* The Bombay merchants who bought oysters were all Mohammedans, but there were many Bombay dealers in pearls in the bazaar of other races. Among the dealers even such distant places as Ludiana in the Punjab were represented.

Muttubála Chetty of Ramnad and Madura was the largest purchaser. He bought 15½ lacs at the sales at a cost of nearly Rs. 61,000, and altogether he told me he had purchased 20 lacs, and had, when he left, already made a profit of Rs. 30,000, and had two lots of pearls for which he wanted Rs. 100,000 and Rs. 60,000 respectively. He sends pearls to a London firm.

Next to him came Sinnanan Chetty of Ramnad with nearly 776,000 oysters purchased at a cost of nearly Rs. 40,000.

The Moormen of Kilakarai and other Indian towns confined their purchases to much smaller quantities, ranging from 2 to 50 thousand at a time. With a few exceptions they did not appear on the scene until 22nd March. They were much in evidence on some days, such as 4th April when the result was a very good sale, and a large number of purchasers of small quantities. The kottu was in consequence not cleared next day until near midday; there were 134 kottu orders issued, though the oysters were only 12½ lacs. On a similar day 30th March, with less than 9 lacs there were 107 orders. These sales may be contrasted with that on another day early in the fishery, when there were nearly 11 lacs to dispose of and the Chetties had the sale all to themselves, when the number of orders issued was only 21. A few of the Indian Moormen took 50 thousand at a time, but this did not happen often. The exceptions were a Moorman of Nambutali, who took 230 thousand, and another of Adrampatam, who took 100 thousand on 12th April, and the balance of over 100 thousand at the last sale. The same man had bought 50 thousand on the third day. The small purchasers were useful, however, in sending up the prices at the sales.

Ceylon occupies a very minor position at the sales. Jaffna took the largest quantity, 11½ lacs and next to it Colombo, under 7, and Mannar, under 5. The chief item in the Jaffna purchases was 500 thousand bought by a Moor trader on behalf of a syndicate. This was made on 2nd April, when the price had gone down to its lowest point of Rs. 12 a thousand, and was the largest single bid during the fishery. I heard before I left the fishery that the purchaser had found nothing. It was a dead loss, which is perhaps not to be wondered at if Mr. Hornell's account of the fishing on 2nd April is considered. But it brought in Rs. 6,000 to Government, and the result did not deter the purchaser from making further purchases at the last sale but two.

Next to him the chief purchasers from Jaffna were the representatives of a Bangali trader who has been settled in the town for thirty years. They purchased steadily in small quantities throughout

* See Annexure IX.

the fishery until these had reached nearly 2 lacs at an expenditure of Rs. 7,700. Even here it is India, not Ceylon, that should be credited with furnishing the most regular purchasers.

Deducting these 7 lacs there were only 4½ lacs taken by the traders of Jaffna less than the quantity purchased by the Moormen of the Mannar District. It is clear that the Ceylon trader, Tamil or Sinhalese, does not take kindly to the speculation of purchasing oysters. If a Ceylon pearl fishery depended on the people of Ceylon it would not make much of a show, syndicates or no syndicates. The fishery is not much honoured in its own country.

There were 1,260,700 oysters exported to India and 2,530,053 to Ceylon ports, the latter daily by Sinhalese fishing canoes and occasionally by a steam launch a few hours after the landing of the oysters from the boats, and as soon as the divers had disposed of their shares. This continued up to 15th April, when the south-west had set in hard and all the Sinhalese canoes disappeared. The export of oysters was less by 739,972 than in 1903, and the diminution was due to a decrease in the quantity exported to Ceylon ports, as the export to Indian ports was greater by 246,700 than in 1903.

The London pearl merchant referred to, a Mr. M. G. Klean, was on his way to South Africa, but missed his steamer at Colombo and had to remain some weeks until the next one left. Meanwhile he saw the announcement of the fishery and chartered a native vessel to take him to it. He was allowed to put up a kottu of his own, protected with a barbed wire fence, about a mile north of the camp beyond Devil's Point, where he had his oysters washed. He told me that he had done pretty well over the 160,000 oysters which he had bought at the sale on 23rd March, but "nothing very brilliant," he had found no pearl of great value. He was, however, quite satisfied with the result of the experiment. He had also bought pearls from divers before he made this purchase, and they had given better results.

A statement of oysters exported is annexed.*

XIV.—Pearl Market.

A distinguishing feature of the fishery of 1904 was the large quantity of pearls which the oysters yielded. As regards quality, the pearls were generally considered not to come up to the standard of 1903. The oysters fished for the first fortnight, *i.e.*, those from the South-West Cheval, were said to have been very rich in pearls, *i.e.*, in the quantity they yielded, and the merchants who purchased at the sales held during that period did well.

There were not so many large pearls as in 1903, and the largest pearl found is said to have been sold in the camp for Rs. 2,500.

The pearl market was rather dull for the first few days, possibly owing to the Indian markets having been glutted with the pearls of 1903, but later on there was a rise in prices which continued steadily to the end.

XV.—The Fishery Town.

The arrangement of the fishery town was the same as at last year's fishery, with the exception that the whole of the southern side of Main street was reserved for pearl merchants, the northern side being occupied by the divers' quarters. Divers' street and Tank street running southwards from it at the western end were handed over to the provision dealers and general merchants. The cloth merchants were confined to Chetty street, and sites in Old and New Moor streets were allotted to petty traders, though some of the pearl merchants had their quarters there. New Moor street was affected chiefly by dealers who went in for the sifting of *saruku*. There was ample room in these streets for all applicants, and some of the sites marked out were never occupied.

The private totties, as before, occupied the ground lying along the seashore north of the Government kottu. With the wind generally from the south-west during the day and from the land at night this is by far the most suitable site that could be chosen for them, as the stench of decaying oysters is carried away from the camp, the whole of which lies to the south of it.

A fee of Rs. 10 for a sight of 12 feet square in the camp was again charged, and the same fee was charged for *totti* sites. It was readily paid, and I never heard of any complaints by the merchants and traders on this score. Now that the experiment has been tried at two fisheries it may be regarded as an established practice. The amount realized from this source was Rs. 5,380, Rs. 1,046 more than last year.

The sites were allotted after the arrival of the bulk of the leading merchants and traders as far as possible in the order in which the applications were received. There was no dissatisfaction caused by the manner in which the allotment was made. Within a very short time the totties were ready for the reception of oysters, and dealers and traders had run up their boutiques, hung them with cloth, spread out their mats, put their safes and large wooden chests in position, and produced their brass "baskets" and sifting implements, awaiting the appearance on the scene of the first pearls.

The Indian merchants brought their own coolies with them, and after the first few days there was no lack of labour, and the oysters were removed from the kottu to the totties with promptitude. The amounts paid to the coolies were regulated by the relative distances of the totties from the kottu, and some coolies made as much as Rs. 2·50 a day.

XVI.—Pearl Town.

The sellers of cakes and sweetmeats and sweet drinks and the fakers of pearls with their files and little three-legged stools for working on stationed themselves under every "mustard" tree† that had been left standing in the broad thoroughfare of Main street which was at least 100 feet wide. At night these were reinforced by the proprietors of diminutive peep shows. The boutiques of the general shopkeepers were crammed with a display of every small article it was possible to think of, made, I regret to say, chiefly in Germany, Austria, and Italy. There were plenty of sellers of native medicines with posters printed on papers of many colours in every vernacular language of Southern India and Ceylon including Sinhalese, describing their effects. Every day a man stood on a tub in Main street and addressed the crowd in voluble Tamil on the subject of the books and pamphlets he was selling.

---

* See Annexure X.

† *Salvadora persica*, the commonest tree at Marichchikaddi.

In Tank street there were several boutiques where people endeavoured to win Rs. 10 notes or clocks, or at least a 10-cent piece by throwing a ring on to a spike, or encircling a coin with it. A throw cost one cent. This game was much patronized, and the proprietors, who were chiefly Sinhalese, made a good thing out of the sporting instincts of the crowd; but as these games were technically games of skill and not of chance they were not interfered with.

The favourite article of food was apparently a sort of pancake, which, flavoured with the pearl fishery fly, was sold in the streets in large quantities. The whole process of cutting off a portion from a large lump of dough, flattening it out on a large iron slab placed over a fire, turning it about until it assumed the required consistency and appearance, and finally smearing it over with ghee, was carried out in the street while you waited.

The population was a thirsty one, but for the most part contented itself with teetotal drinks, which, however, were very much mixed.

XVII.—Population in Camp.

A census of the population was taken by the Sanitary Officer and the Adigar and some other officers on the night of 31st March, by which date it must have reached its highest point. I annex a copy of the report, from which it will appear that it was under 20,000.* I am of opinion that the actual population was somewhat larger than this, and that in some way or other numbers of the population escaped inclusion in the enumeration, which is perhaps not to be wondered at. This is confirmed by the fact that the number of divers from countries other than India and Ceylon is given as 235. This can only refer to Arab divers, but the Beach Master in a report of the same date gives the number of Arab divers as 258 with 32 manducks of the same race. But, on the other hand, it must be admitted that the number of the Indian population (14,378), is very near the figure given by the Superintendent of Immigration in a return furnished to me of the number of passengers for Marichchikaddi shipped from Paumban and Kilakarai between 10th March and 29th April, which was 14,431. In 1903 the number that proceeded from the same ports to the fishery between 12th February and 15th April of that year was 16,047. There were, therefore, only 1,616 fewer Indian people in the camp in 1904 than in 1903. But Mr. Ievers estimates the population of the camp in 1903 to have been "quite 40,000 for a considerable time," *i.e.*, more than double the highest population of the camp in 1904. If this conjecture is correct there must have been more than 20,000 more Ceylon people at the fishery in 1903 than there were in 1904, when the Ceylon population was not more than 4,000, which of course is impossible. The population at the fishery of 1903 was, I think, considerably over-estimated.† This was the second occasion on which an attempt was made to take a census of the fishery population, the first having been carried out at the fishery of 1891. The result is, I think, of some value. I should put the population this year at 20,000.

XVIII.—Medical Arrangements and Health of Camp.

The medical arrangements were the same as at the last fishery and the various hospitals were re-erected on the same sites, but to these was added a house of observation for use in case of the occurrence of any suspicious cases. It was with a feeling of great satisfaction that I learnt from the Principal Civil Medical Officer that Dr. Spittel, who had ceased to act as Colonial Surgeon of the Northern Province at the end of last year, was nevertheless to be again in charge of the camp. Though, thanks to the excellent health which the camp this year enjoyed, he had a less arduous time than he experienced last year, yet there were for him some anxious days and nights at times when there was a possibility of doubtful cases of sickness among the passengers landed or in the camp turning out to be of the most serious nature. At such times no precaution was omitted which might help towards the security of the camp from the inroads of cholera or plague. I can only reiterate what Mr. Ievers has said of his zeal and devotion to duty. Reference should be made to his report addressed to the Principal Civil Medical Officer for details of the medical history of the camp.

Marichchikaddi, which had acquired a bad reputation in the Province as a hotbed of malaria, this year falsified the gloomy prognostications which had been extensively formed of it. It was remarkably healthy from the day the fishery started to the end. I attribute this to the dry weather that prevailed at and before the fishery, and to the fact that owing to this dry weather the fever season was at an end before the fishery began, and there were no mosquitoes.

There was a remarkable absence of the pearl fishery bluebottle flies during the first half of the fishery. It was not till after Easter week in April that they began to show themselves in force, and, strange to say, they seemed to be superseded almost altogether after a week or two by a plague of the ordinary house flies, which, though less objectionable from a hygienic point of view than the bluebottles, were much more annoying.

XIX.—Sanitation.

The same arrangements were made as at last fishery. The 136 scavengers were supervised by Mr. Nicholas, the Sanitary Officer, Jaffna, and a gang of them was placed under Sergeant Narayanasami, No. 1,234, of Jaffna, who was given charge of the divers' quarters and Main street. He was experienced in this work, having acted in the same capacity at the fishery of 1891. The work was on the whole performed very satisfactorily, and the sanitary coolies were found useful in many ways.

XX.—Quarantine and Plague Regulations.

The plague regulations in force in the Northern Province were again temporarily relaxed so as to allow of boats and passengers form India landing at Marichchikaddi. But this year boats with *bonâ fide* divers were allowed to proceed to the fishery direct from Kilakarai instead of requiring them to get clearances at Paumben.‡ This facilitated the arrival of the Kilakarai divers, who form an important factor in the success of a pearl fishery, and passengers from India to the fishery were allowed to travel either *viâ* Tuticorin to Colombo and thence to Marichchikaddi or *viâ* Paumben direct. The concession was much appreciated by them. Passengers who travelled by the former route were subjected to the existing quarantine restrictions, while those who chose the latter were only

* Annexure XI.

† Sir William Twynam estimated the fixed population at the fishery of 1889 as between 14,000 and 15,000, and the census taken at the fishery of 1891 showed the population then to be 24,700.

‡ The Customs Returns show that one boat arrived direct from Tuticorin. This was not reported to me at the time.

subjected to inspection by the Ceylon Medical Officers, two of whom were stationed at Paumban for the purpose, and who issued passes in respect of each boatload of healthy passengers irrespective of the district from which they came. At Paumban Dr. Prins and Weeraperumal, specially appointed for this duty, were assisted in it by the Medical Officer of the Immigration Department. A Medical Officer was sent to Kilakarai to pass boats there. A Medical Officer also accompanied the British India steamers proceeding from Paumben to Marichchikaddi coming with one steamer to Marichchikaddi and then changing to the other steamer which was returning to Paumben the same or next day.

There was fortunately no epidemic reported in Southern India in any of the districts from which the divers came, and none appeared at the camp. At the suggestion of the Assistant Government Agent the quarantine hospitals at Anuradhapura, Puttalam, and Mannar, were this year dispensed with. The Colonial Surgeon at Anuradhapura, the Assistant Colonial Surgeon at Puttalam, and the Medical Officer at Mannar were directed to hold themselves in readiness to detach apothecaries and to make local arrangements, if required, at the sites selected last year instead of opening special quarantine hospitals at the expense of the fishery.

XXI.—Postal Arrangements.

A telegraph office was opened at the camp on 16th February and a Post Office on 10th March. The arrangements were the same as in 1903, and as in that year the Superintendent had nothing to do with them. The expenditure was borne by the Postal Department and the revenue went to that Department. The nett gain to the Department was Rs. 1,315·55, as against Rs. 1,489 in 1903.

A large number of letters and telegrams addressed to temporary and unidentified sojourners at the camp remained undelivered. An attempt was made to find the addressees by sending the letters and telegrams over to the sale bungalow every evening and calling out the names after the sale, but it had little result, and the failure to find persons with common Indian and Ceylon names, whose only address was given as "Pearl Fishery, Ceylon," among a miscellaneous population living in huts cannot be imputed to the Post Office as an instance of inefficiency. The Post Office staff was hard worked, and they had no Sundays off or holidays. The Postmaster, Mr. Werkmeister, had had experience at the Diyatalawa Camp, and he carried out his duties efficiently.

XXII.—Water Supply.

As rumour, both in Ceylon and India, had attributed the prevalence of fever at the fishery last year to the water from the Adappankulam tank used for drinking purposes, and more especially to the existence of prickly pear and of a plant called "kodiveli" (*Hugonia mystax* or white plumbago) within the tank bed. A vote of Rs. 100 was obtained from Government for the purpose of clearing the tank of prickly pear and other plants. But when Mr. Denham and I inspected the tank in October it was found that there was not a single specimen of either plant within the water limits. Little more than half the vote was, however, spent on cleaning the tank of vegetation and dead timber, but no prickly pear or kodiveli plants were found. So much for rumour.

It was found necessary in order to keep buffaloes out of the tank to have the fence round it repaired, and this was done at a cost of Rs. 200. From October also people were not allowed to bathe in the tank, a watcher being stationed at the tank to prevent them.

A great improvement was made in the method adopted for getting the water from the tank into the cement cistern under and outside the bund. At the last fishery this was effected by coolies working well sweeps which lifted the water in buckets over the bund—a clumsy and expensive method. Thirty coolies were employed from the middle of February to about the middle of April, and their pay at Re. 1 a day* amounted to about Rs. 2,000, while the well sweeps and the wooden gutterings cost nearly Rs. 500.

To avoid this heavy item of expenditure, which would be recurrent at every fishery, a cement pipe sluice of the Murray pattern was inserted in the bund, and a large cement cistern built on the outer side of the bund which was to be fed by the sluice.

The work was carried out at a cost of Rs. 1,280·65, and proved to be a complete success. It was necessary to employ coolies only for filling the water carts employed in the service of the camp and the brass chembus, earthenware chatties, and kerosine oil tins brought by the people to the cistern for water, none of whom were allowed to dip any of these miscellaneous vessels into it or fill them with water from it.

Up to nearly the end of December there was not sufficient water in Adappankulam to allow of a fishery being held this year, but fortunately on the last two or three days of the year there was a heavy downpour, which half filled the tank and changed the aspect of affairs. The water in the tank turned out to be ample for this purpose, and at the end of the fishery it seemed to have gone down very little.

A survey and estimate of capacity of the tank were made by Mr. W. Ferguson, Chief Irrigation Inspector, on 24th March, and I annex a copy of his report,† which showed that there was no necessity for any apprehension as to the water not holding out until the close of the fishery. This the event amply verified.

As regards quality, the water was of a muddy yellow ochre colour from first to last, but Dr. Spittel did not think this of any consequence, and he periodically cleared the water in the cistern by Henkin's method.

Dr. Spittel informed me that none of his patients showed any of the symptoms which the use of bad water invariably gives rise to. The analysis of the water by the Government Analyst showed that it contained no nitrates—the element in drinking water which is most to be feared. No complaints of the quality of the water were made by the people, which, as tank and not well water, was quite acceptable to them.

Water for some of the officials was obtained from a well at Karadikuli, 2 miles north of the camp. The well near the old resthouse never had a drop of water in it from first to last, though last year it was used for water for the officials.

---

* It was necessary that the coolies employed should be of good caste—hence the high wages paid them.

† Annexure XII.

Before the fishery began the Adigar opened a well in the bed of the dry water-course that runs into the backwaters of the Modragam below the cliff on which the kottu staff and kottu coolies had their quarters. The water, which was close to the surface, was good, but as the Adigar's example was followed by the opening by private parties of a number of water holes in the same neighbourhood, and as, if there were rain, all these wells were certain to be polluted by the surface water from the whole camp, they were all, including the Adigar's well, closed before the fishery began.

As at previous fisheries, the patrols and the police prevented the people from polluting the water of the tank and from infringing the rules made for its supply.

For bathing, the tank Palaiyadikulam close to the kottu, which is always used for this purpose, was again available and had plenty of water in it. Strange to say the tank below it, Adigarkulam, constructed in 1902 by the formation of a good bund, never had any.

Its bed was used by numerous small groups of people who had made small purchases of oysters from the divers as a convenient place for opening them, and at the end of the fishery was littered all over with shells.

XXIII.—POLICE.

As the fishery bid fair to assume larger proportions than was at first supposed, I informed Government before starting for Marichchikaddi that I should require the same force as was employed last year, viz., 80 men from Colombo, and 20 men whom I could send from Jaffna and Mannar. I also asked for the appointment of Inspector Ludovici, who was in charge of the police at the last fishery and had proved himself an efficient officer. The required number of police which was subsequently increased by ten more, was sent from Colombo. They arrived at the camp on 11th March but were in charge of an Inspector who had had but a short experience in the force and none of a fishery.

The Jaffna police arrived by the "Serendib" on the 13th, and with them the Assistant Superintendent, Mr. Dowbiggin, who, during a week at the camp, took great pains in arranging the different guards and beats and in instructing the police in the nature of the duties they had to perform. The Colombo police were chiefly newly enlisted men from the Depôt, and a large proportion were Sinhalese, which, with a population that almost entirely consisted of Tamil-speaking people, was a disadvantage. The Jaffna men were smarter and more experienced.

Under these circumstances the police deserve a certain amount of credit for having done as well as they did.

The Colombo police remained at the camp until 22nd April, when the fishery was almost closed, on which day the Inspector and main body left for Colombo by steamer. A detachment of fifteen with one sergeant and the Jaffna police were retained until near the end of the following week. The remaining Colombo police left on 26th April, and Jaffna force returned to Jaffna by the "Serendib" on 29th April.

A large number of notices of the departure for the fishery from various police centres in Ceylon of habitual criminals and of "known depredators," or K. Ds. as they are styled in India, from Southern Indian towns were received at the camp police station. Wherever such persons were identified their movements were carefully watched. In one case a gang of them was reported to have come to the fishery disguised as pearl dealers, but nothing resulted—the traders knew them and were on the lookout for them. They do not, however, seem to have had much of a harvest in the way of stolen pearls and other articles, for the thefts reported were not many, and in the majority of these cases the persons charged were not generally known to be H. Cs. or K. Ds.

Considering the size and population of the camp and the value of property in it the general security of person and property which it enjoyed compares favourably with that of any town in Ceylon. The cadjan huts and boutiques were more secure from the depredations of the enterprising burglar than are the bungalows of Colombo. It is true that some of the traders had large safes with them.

There were no serious cases of personal violence.

I append a more detailed report which I have received from Mr. Denham. I would draw attention to his remarks on the desirability of sending men who are entitled to pensions and not recruits to a pearl fishery :—

Report on the Police by Mr. Denham.

The police force sent to the pearl fishery camp consisted of 12 sergeants : 10 from the Depôt at Colombo, 1 from Jaffna, and 1 from Mannar ; and 109 constables : 20 from Colombo, 70 from the Depôt, 16 from Jaffna, and 3 from Mannar. Inspector Morris was in charge of the force.

The behaviour of the police was on the whole good. There was a very large proportion of recruits among the men sent from Colombo ; at the fishery of 1903 the Colombo men were nearly all pensioners. At future fisheries I would suggest that pensioners be again employed on fishery camp duty. There is very little crime at a fishery—practically no offence against the person.

At the same time it is most necessary to ensure the security of the merchants and traders who bring very large sums of money with them. Police protection rather than police intervention is required.

The force should be composed of men who have everything to lose, if detected in the commission of any offence. The pensioner knows that if he is convicted of extortion or interference with the public he may lose his pension ; the young recruit is apt to regard lightly the retention of his position in the force, and the opportunities of making money are great. There were a few cases this year in which constables attempted to extort money from the merchants and interfered with persons who refused to pay them commissions. Four men were sent back in disgrace to Colombo.

The general work of the police was, however, very satisfactory. The merchants expressed themselves as thoroughly satisfied with the police protection afforded them. There was no serious disturbance in the streets ; there were a few cases of affray, nearly all due to quarrels over pearls. The parties were in such cases promptly taken in charge.

There was a very large number of Ceylon habitual criminals and Indian known depredators in camp ; they were well supervised. Forty-seven of these men were brought up before the Police Magistrate and identified. They had to report themselves weekly and

give notice when they left the camp. P.C. 1,290 Antonipillai of the Jaffna force did good identification work.

The knowledge that their movements were watched and that their description was known to the police had a very good effect on their behaviour, and prevented any concerted action by a gang of bad characters.

The fact that there were only three cases of theft, in which the sum lost was at all considerable speaks very well for the general security, when it is remembered each trader had with him a large sum of money, and that probably 2 to 3 millions of rupees changed hands during the five weeks the fishery lasted.

The police made some clever captures of stolen pearls on the person of the divers as they passed out of the kottu. It is the business of the constables at the kottu gates to search any person whom they think may be concealing pearls, and to hand over their captures to the Kottu Superintendent. The divers, in spite of the precautions adopted, undoubtedly succeed in opening oysters on the boats as they return from the banks. They resort to the most ingenious devices to secrete these pearls, concealing them in their ears, nose, and other parts of the body, while they also hide them in the boat; one practice adopted was to make up a small parcel and run it up with the sail or attach it securely to the anchor when it is heaved overboard, to be drawn up at a favourable opportunity.

In addition to the constables at the kottu gate all the off duty men are sent to search the boats, and captures were made in the places above described.

The pearls thus seized by the police were sold for Rs. 800,* probably worth more.

Monetary rewards, varying from Rs. 40 to Rs. 2·50, were given to two sergeants and twenty-one men. Good work was also done by the police in superintending the scavenging parties. Police sergeant 1,234 Narayanaswamy did excellent work. He was given a reward of Rs. 30, and rewards were given to three constables. The police were also on duty as guards at the Treasury, Government buildings, and kottu; they prevented any pollution of the water tanks, and performed the usual beat and station duties. The force was sufficient, but not too large for the many duties the police had to perform. The quarters provided for them were satisfactory. The station erected last year in Main street was not re-built at this fishery—it was found to be unnecessary. The two stations were the main station at the barracks and a station on the hill above the kottu.

The health of the police was very good, there was only one case in which a constable was detained in hospital for more than two days, and he subsequently returned to duty.

E. B. DENHAM.

XXIV.—Police Court.

The court arrangements were the same as in 1903. The work of the court was considerably heavier than in that year, though the number of persons prosecuted for committing nuisances was very much smaller (83 in 1904, as against 366 in 1903). In view of the general cleanliness which characterized the camp this year, the decrease may perhaps be ascribed to stricter observance of the camp rules by the general public, possibly due to the experiences of last year. A table of cases instituted in the Police Court is annexed.†

The amount of half fines awarded to the Police Reward Fund was Rs. 131·62.

XXV.—The Customs.

The port of Pukulam, which is the name of the sandy spit and cocoanut tope which form the northern bank of the mouth of the Modaragam river and on which the Custom-house stands, was again placed in charge of Mr. Leembruggen, Sub-Collector of Kankesanturai, who had acted in the same capacity at several former fisheries.

The total Customs revenue collected during the fishery was Rs. 820, as against Rs. 1,534·62 last year. The decrease was due to the fact that the local market was supplied to a large extent this year with grain and cotton goods from Ceylon ports, instead of from India, which goods when imported coastwise pay no duty.

Owing to the late commencement and short notice given of the fishery Indian merchants had no time to send over their goods from India, and the market when they arrived had already been stocked with food stuffs from Ceylon ports. Two dhonies which arrived from India with rice found that there was no sale for it, and took it on to Kalpentyn.

A statement of the Customs revenue is annexed.‡

XXVI.—Steamer Service.

As at last fishery arrangements were made by Government with the British India Steam Navigation Company for a steamer service between Colombo and Marichchikaddi and Marichchikaddi and Paumben. The service which was a bi-weekly one began on 10th March, and was continued till after the close of the fishery, the last steamer "Amra" leaving Marichchikaddi for Colombo on 30th April.

The "Bhadra" could find room for 1,000 passengers, the "Amra" for 750, but on some occasions they could not take so many from Marichchikaddi, having on such occasions a number of passengers to or from Tondi on board.

There was a considerable congestion at Paumben of passengers waiting to go to Marichchikaddi during the first week of the fishery, and by 21st March, 2,000 people were assembled there awaiting transport. In consequence, the British India steamers made four extra trips from Paumben during that and the next week. To enable the "Amra" to make this double trip, the coolies she was carrying from Tondi were landed at Paumben, and their food while there provided for them by the Immigration Department.

---

* See Annexure XV. † Annexure XIII. ‡ Annexure XIV.

The steamers running to Paumben during the last week of April were fortunately just able to take away all the Indian people who had remained after the close of the fishery; chiefly petty traders and coolies, with some of the Arab divers. Only forty persons were left behind when the last steamers had started for Paumben and Colombo, and they were taken over to Paumben in the large sailing boat belonging to the Company which had been used for landing passengers and taking them out to the steamers.

The delay caused considerable inconvenience both to people waiting at Paumben for transport to Marichchikaddi at the beginning of the fishery and to people waiting to get away from it at the end. The congestion at Paumben might have had serious effects, and even resulted in the outbreak of an epidemic, and the enforced delay at Marichchikaddi of some of the poorest of the people who attend a fishery at the end were both experiences that should be avoided in future. The prices of provisions at Paumben went up to a very high figure, and the delay at Marichchikaddi* might have ended in semi-starvation for many of the people owing to the departure of most of the provision dealers.

What was really wanted was at least a tri-weekly service between Paumben and Marichchikaddi during the first and last weeks of the fishery, that is to say, there should have been steamers running daily from Paumben to Marichchikaddi one day and back the next. This should have been in addition to the bi-weekly service between Colombo and Marichchikaddi.

There was a good deal of dissatisfaction among the Indian people at the action of the Company in charging passengers returning to India double fares or fares of half as much again. The plea was that many people had bought tickets at the usual price, and then sold them to third parties who were in a hurry to leave at more than double what they paid for them. It would be desirable at future fisheries, when making arrangements with the British India or any other Company for a steamer service, to make some stipulation as to the fares to be charged, which should be fixed and not variable.

The Company exhibited some jealousy at competition by other steamers and vessels in carrying passengers. If the steamer service had been ample at all times for all requirements this would not have been unreasonable, but such, as I have shown, was not the case. There is however no means of stopping such competition.

A temporary jetty consisting of a platform of railway sleepers lashed together and supported by piles was erected by the British India Company for landing and embarking their passengers. I agreed to pay half the cost of construction (which was Rs. 190) on condition that it was thrown open to the public generally, which was done. It was found very useful, but it had to be removed when the last steamer left for Paumben, as it would not have lasted through the south-west monsoon.

With the exceptions above referred to there is no doubt that the steamer service was very useful to the fishery, and considering the short notice that was given to the Company that it would be required, arrangements to which no exception could be taken were perhaps not to be expected. Altogether, the British India steamers took 6,784 passengers to the fishery from Paumben and brought back to Paumben 5,919.†

XXVII.—VISITORS.

This fishery was as remarkable for the small number of visitors as the fishery of 1903 was for the "unprecedented number" that attended it. The resthouse was for the greater part of the time untenanted, and it was never tenanted by more than five visitors at the same time.

The planting community was represented early at the fishery by Captain Gordon of Passara and Mr. Saville, and later on by Messrs. Carmichael and A. Bowle Evans.

H.M.S. Porpoise arrived off Marichchikaddi on 19th March, and Commander Hotham and a party of his officers visited the camp and kottu. Captain Castle, R.A., was another visitor.

It was expected that His Excellency the Governor and party would visit the fishery on 18th March, but the visit was postponed and eventually definitely abandoned, much to the disappointment of the fishery staff.

The Hon. the Lieutenant-Governor and Mrs. im Thurn, with Sir John Keane, Private Secretary to His Excellency, and Mr. Southorn, Private Secretary to the Lieutenant-Governor, paid a visit to the fishery during the Easter holidays, arriving on Good Friday, 1st April, and leaving on Easter Monday by the British India Steam Navigation Company's ss. Bhadra. The Lieutenant-Governor inspected the hospital, camp, and kottu, and attended the sales on the three evenings that he was in the camp. He also went out to the banks on the morning of Easter Sunday in the "Serendib," but there was no fishing that day.

XXVIII.—WEATHER.

Until nearly the end of March the weather was pearl fishery weather—calm mornings with a light breeze from the land which died away before the sun was high, and in the afternoons a fresh breeze from the sea. The nights were after midnight very cold. The night of 21st March was rather squally.

With the beginning of April the south-west winds began to prevail, and they much mitigated the heat of the day, but at the same time put an end to the cold nights and also made fishing difficult. The wind from shore in the early morning could not be counted on, in fact on some nights the south-west wind was continuous the whole night through, but generally there was very little wind in the morning until about 8 or 8.30 A.M., when the south-west regularly set in for the rest of the day On some days the weather was boisterous, as, for instance, on 1st, 5th, 6th, 9th, 15th, 17th, 18th, and 19th April, but after that improved a little till the end of the fishery. On the 24th it was again blowing hard all day from the south-west.

---

* Some of the Chetties who had been unable to get away offered me large sums of money for the use of the "Ready," "Serendib," or the "Mohideen Bux" to take them to Paumben.

† I have not got the figures for the traffic between Colombo and Marichchikaddi.

There were showers on the afternoons of 10th and 11th April and on the morning of the 12th, but they did not last long.

XXIX.—Sale of Arrack.

The arrangements for the sale of arrack were similar to those made last year. The arrack renter paid Rs. 3,000 for the privilege of selling arrack at a number of taverns in the fishery town. Last year the sum paid was Rs. 2,000. The business was conducted satisfactorily.

The Puttalam arrack renter set up a claim, which was disallowed, to open a tavern on the sandy spit of land known as Pukulam, the name of the village on the opposite side of the river, on the ground that it formed a part of that village and therefore was in the Puttalam District. But the river is taken as the boundary between the two districts, and for the last fifteen or twenty years at least this portion of land has been on the Mannar side, and at the four fisheries held at Marichchikaddi, it has been included within the camp limits.* There can be no doubt, however, that the mouth of the river has changed its location. Eventually the two renters came to an agreement, under which the Puttalam renter contented himself with a tavern south of the river mouth.

XXX.—Benefits resulting from the Fishery.

It is a favourite axiom of one of the Colombo newspapers, which was first laid down in 1903, and which we had repeated in 1904, that only Government makes anything out of a pearl fishery. "As regards last year's fishery, it was well known that Government was the only party which came out of the affair with success."† The absurdity of this statement has only to be pointed out to be apparent. Indian merchants, many of whom have been purchasers at numerous former fisheries and most of whom were present and purchased oysters at the fishery of 1903, flocked to the fishery of 1904, and, with strange infatuation or solely for the benefit of an alien Government, enact the same part again. Is it conceivable that they would go on doing it, if they did not make money out of it, and often much money?

It may be assumed, therefore, that a successful fishery is not only a benefit to Government, but to the merchants and traders who attend it to traffic in oysters and pearls, and who find in it an extensive field for these transactions. In my opinion it is almost a certainty that any one who buys, say, a lac of oysters at a fishery under ordinary conditions will make a profit out of the speculation. I have referred to one instance at this fishery which was an exception to the rule, but it was not difficult to give good reasons for this, which will be found in Mr. Hornell's remarks on the fishing of 2nd April.

The fishery is also a benefit to the divers, manducks, boatmen, and boat owners, whose share of the oysters fished amounts to half the share that Government gets, and who probably make as good a thing out of the disposal of them as the Government does out of its share; probably a good deal better. If they did as well they must have made 5¼ lacs of rupees between them.

But there are other benefits derived from a fishery. The Indian and Ceylon coolies and villagers employed at it receive very good wages, and are therefore largely benefited by the holding of a fishery, and so do the villagers of the neighbourhood who are employed in putting up the camp buildings. Large sums are distributed both by Government and by Indian merchants in the shape of wages. It has been estimated that Rs. 200,000 must have been spent in this way at this fishery by the merchants and Rs. 10,000 on buildings, while Government spent some Rs. 90,000, including Rs. 25,000 on buildings, on the fishery.

This fishery was in particular a Godsend to the people of the Moor villages of Musali South, who had suffered from a failure of their crops for two years from want of water in the tanks. The petty traders who attend the fishery in large numbers and open boutiques there also make much money out of the crowds whom it attracts.

In fact it is obvious that an event, which results in the introduction into the Island of a large sum of money from the neighbouring continent, and in the spending of a great portion of it there, cannot be otherwise than to the benefit of the country.

XXXI.—Miscellaneous.

Mr. Dixon's Machinery for washing Oysters.—Mr. Dixon arrived on 11th March, and immediately set to work superintending the landing and erection of his new machinery for washing oysters, the former a very difficult task which required constant personal supervision. He was still engaged on the latter when the fishery closed.

Casualties.—A Kilakarai diver of boat No. 158 was brought up dead from the water on 20th March. He was an elderly Moorman, and the cause of death was either apoplexy or exhaustion due to his remaining under water too long. This was the only fatality among the divers.

Four divers' boats were driven from their moorings and broken to pieces on the seabeach towards the end of the fishery, when the south-west wind was very strong. Some small sums were paid to the owners to help towards reducing their losses.

A Jaffna boat capsized on the 12th on its way in owing to collision with another boat. The crew and divers were all rescued, but the boat had to be abandoned and was supposed to have sunk; but it was found after the fishery on the rocks at Kallar. The owner was paid Rs. 100 compensation by the tindal of the other boat.

Canards.—The usual canards and some others appeared in the papers with respect to the pearl fishery. To some of these I have already alluded. The statement that sharks were daily attacking the divers, and that "almost every day there was a distressing incident of this nature," even though it was made on the authority of a "European visitor to the pearl fishery" who "estimates that on the average one diver a day has fallen a prey to sharks" with three victims on the day he left,‡ is

---

* The Proclamation of the Port of Pukulam issued this year described "the roadstead and Town of Pukulam" as being situated in the Northern Province.

† "Times of Ceylon," March 2, 1904.

‡ "Times of Ceylon," 19th April.

perhaps too ridiculous to deserve notice were it not for the air of verisimilitude given to it by the mention of the European visitor fresh from the fishery. It shows also how an utterly baseless rumour that may be prejudicial to the fishery at once obtains credence and facilities for extensive circulation. Probably in the English newspapers the dangers of a diver's life and the indifference to the sacrifice of it shown by the Ceylon officials, as evinced by this extract from a Ceylon newspaper of repute, still form the subject of editorial comment. Not a shark was seen, though towards the end of the fishery, when some of the divers were anxious to leave, the customary and incontrovertible statement was made that "there were sharks in the sea."*

As in 1903, the fishery had hardly started before the cholera bogie made its appearance in the papers and was duly laid. Its origin was probably due to the same fertile imagination that later on conjured up the sharks from the vasty deep of the Cheval.

There were, of course, numerous minor inaccuracies in the newspaper accounts. The "Ready," the "Serendib," and the "Nellie" were all converted into "dredgers" when the first two steamers took out Arab divers on a day when the boats could not go out and dredging was impossible. Mr. Dixon was washing oysters with his new machinery, and a police constable developed enteric† and had to to be left behind at the close of the fishery. "The wealthy Indian merchants did not turn up at the fishery this year in as large numbers as was expected. They had probably not recovered from the disappointments of last year's fishery"‡. They recovered to the extent of buying nearly 25 out of 27½ million oysters sold, and for these they paid about 9½ lacs of rupees. I think they may be regarded as convalescent.

In conclusion I wish to place on record my appreciation of the ready and willing assistance given me by all the officers and subordinates during the fishery. Everyone worked hard, and there was no shirking of duty and no grumbling.

Jaffna Kachcheri,
June 13, 1904.

J. P. LEWIS,
Acting Government Agent and
Superintendent of Fishery.

Annexure I.

Revenue and Expenditure.

The total collection at the fishery by sale of oysters was Rs. 1,054,694·78. To this must be added the following items :—

		Rs.	c.
1.	Customs collections	830	0
2.	Amount of revenue by Postal and Telegraph Department ...	3,263	75
3.	Fines and forfeitures paid by the Police Court	401	76
4.	Amount recovered for boutique sites	5,370	0
5.	Value of confiscated and sample pearls	2,010	93
6.	Amount recovered from arrack and liquor licenses and refreshment rooms	3,520	0
7.	Fines and forfeitures on boatmen, &c.	246	34
8.	Miscellaneous	129	89
	Total ...	15,772	67

The total expenditure cannot now be ascertained; there may be more charges to be met. The following, however, is the expenditure up to date :—

		Rs.	c.
Salaries and allowances,	Superintendent's establishment	44,945	16
Do.	Customs Department...	890	48
Do.	Police	6,492	79
Do.	Postal Department	2,050	76
Medical Department	... ...	4,621	42
Pearl fishery stores and articles	... ...	6,391	44
Transport charges	... ...	1,087	46
Miscellaneous ...	... ...	1305	95
Medical stores...	... ...	2,353	97
Camp buildings	... ...	22,100	73
Pay of substitutes	... ...	2,130	40
		94,370	56
Approximate expenditure by other Departments	... ...	30,548	13
	Total ...	124,918	69

---

* Sir William Twynam tells me that he has never, in the whole course of his experience of pearl fisheries, known of a diver being carried off by a shark, and has only heard of one case—which was a very doubtful one. It was during an attempt to fish the Karativu bank in the north-east monsoon in 1889, when the divers were anxious to leave and made various excuses that the water was too cold, &c., and that one of them had been carried off by a shark. The name of the alleged victim was never discovered, and it was very doubtful if a man had been carried off or even drowned. The late Mr. A. M. Ferguson in his address at the Conversazione of the Ceylon Branch of the Royal Asiatic Society in 1887, says, "I think it is pretty certain that in the whole course of the Ceylon fisheries only two human beings have fallen victims to these fierce fishes." (Royal Asiatic Society Proceedings, 1887–88, p. xvii.).

† There was not a single case of enteric fever in the camp.

‡ "Times of Ceylon," 17th April.

Annexure II.

Statement of the Valuation and Produce of 3,000 Oysters taken from the South-West Cheval Paar in December, 1903.

Description.	Size in Basket.	Number.	Quantity in Chevoe.	Kalangey.	Manjady.	Total. Kalangey.	Total. Manjady.	Value.	Per Chevoe.	Per Kalangey.
								Rs. c.		
Nappal Kalippu	20	1	—	—	$\frac{5}{8}$	—	—	1 9	—	10 star pagodas
Ani	30	1	$\frac{18}{320}$	—	$\frac{9}{32}$	—	—	7 $87\frac{1}{2}$	40 star pagodas	—
Masakoe	30	1	—	—	$\frac{5}{16}$	—	—	0 33	—	6 star pagodas
Surippu	30	1	—	—	$\frac{1}{4}$	—	—	0 44	—	10 star pagodas
Nappal Kalippu	30	1	—	—	$\frac{1}{4}$	—	—	0 44	—	10 star pagodas
Anatari	50	1	$\frac{8}{320}$	—	$\frac{3}{16}$	—	—	1 $87\frac{1}{2}$	20 star pagodas	—
Kalippu	50	6	—	—	$1\frac{1}{4}$	—	—	4 $37\frac{1}{2}$	—	20 star pagodas
Anatari	80	1	$\frac{5}{320}$	—	$\frac{5}{32}$	—	—	1 9	20 star pagodas	—
Kalippu	80	6	—	—	$\frac{13}{16}$	—	—	2 84	—	20 star pagodas
Kuruval	80	3	—	—	$\frac{5}{8}$	—	—	1 31	—	12 star pagodas
Vankodai	80	2	—	—	$\frac{1}{4}$	—	—	0 9	—	2 star pagodas
Pisal	80	2	—	—	$\frac{3}{8}$	—	—	0 39	—	6 star pagodas
Vadivu	100	—	—	—	$4\frac{1}{2}$	—	$12\frac{1}{8}$	42 44	—	20 star pagodas
	200	—	—	—	$4\frac{5}{8}$					
	400	—	—	—	3					
Pul	600	—	—	—	$4\frac{3}{4}$	—	$10\frac{1}{4}$	12 $55\frac{1}{2}$	—	7 star pagodas
	800	—	—	—	$2\frac{3}{4}$					
	1,000	—	—	—	$2\frac{3}{4}$					
Masu-tul	—	—	—	—	$3\frac{1}{8}$	—	—	1 39	—	$2\frac{1}{2}$ star pagodas
Shell Pearls	—	—	—	—	—	—	—	1 50	—	—
				1	$10\frac{14}{16}$			80 3		

Marichchikaddi, January 4, 1904.

E. B. DENHAM,
Assistant Government Agent, Mannar.

V. VRASPILLAI, Musali Adigar.

ச. மு. செ. செய்யது முகம்மது நெயினா.
செ. யி. சதகத்துலெவவை.

Annexure III.

An Account showing the Number of Diving Boats, the Number of Divers and Manducks that have daily arrived from each Port during the Pearl Fishery, 1904.

Date.	Ceylon Ports.						Indian Ports.										Total Number of Boats.	Total Number of Divers and Manducks.
	Colombo.		Jaffna.		Mannar.		Vempar.		Kilakarai.		Paumben.		Tondi.		Davipatam.		Tuticorin.			
	Boats.	Divers and Manducks.	Boats.	Divers and Manducks.	Boats.	Divers and Manducks.	Boats.	Divers and Manducks.	Boats.	Divers and Manducks.	Boats.	Divers and Manducks.	Boats.	Divers and Manducks.	Boats.	Divers and Manducks.	Boats.	Divers and Manducks.		
March 13 ...	4	240	1	23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	263
Do. 14 ...	—	—	—	—	—	—	—	—	—	—	1	30	—	—	—	—	—	—	1	30
Do. 15 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	292	6	292
Do. 16 ...	1	50	7	70	—	—	—	—	—	—	—	—	—	—	—	—	1	52	9	172
Do. 17 ...	—	—	—	—	—	—	—	—	16	418	—	—	—	—	—	—	—	—	16	418
Do. 18 ...	—	—	4	40	—	—	—	—	33	826	8	160	—	—	—	—	5	232	50	1,258
Do. 19 ...	—	—	—	—	—	—	—	—	37	1,014	12	230	—	—	—	—	—	—	49	1,244
Do. 20 ...	—	—	6	66	—	—	2	62	9	232	17	531	—	—	—	—	2	94	36	985
Do. 21 ...	—	—	7	57	—	—	—	—	—	—	8	329	—	—	—	—	2	95	17	481
Do. 22 ...	—	—	—	—	4	188	—	—	—	—	—	—	1	40	—	—	2	94	7	322
Do. 23 ...	—	—	—	—	—	—	—	—	—	—	—	—	1	50	1	54	—	—	2	104
Do. 24 ...	—	—	—	—	2	102	—	—	—	—	—	—	—	—	—	—	—	—	2	102
Do. 25 ...	—	—	—	—	3	144	—	—	—	—	—	—	—	—	—	—	—	—	3	144
Do. 26 ...	—	—	—	—	1	36	—	—	—	—	—	—	—	—	—	—	—	—	1	36
Total ...	5	290	25	256	10	470	2	62	95	2,490	46	1,280	2	90	1	54	18	859	204	5,851

Annexure IV.

Fishery No.	Description and Number of Boat.		Places to which Divers, &c., belong.	Divers.	Manducks.
1	Colombo	14	Arabs	18	20
2	Do.	1,092	do.	10	16
3	Do.	13	do.	16	10
4	Jaffna	1,752	do.	20	20
5	Colombo	1,136	do.	20	20
6	Jaffna	952	do.	8	8
7	Do.	1,713	do.	15	15
8	Do.	1,765	do.	18	2
9	Do.	1,651	do.	14	12
10	Do.	86	do.	12	14
11	Devipatam	7	Devipatam	15	15
12	Jaffna	1,670	Arabs	14	14
13	Tondi	21	Tondi	12	12
14	Jaffna	46	Arabs	14	18
15	Tuticorin	43	Tuticorin	33	33
16	Do.	"Kuthubalam"	do.	29	29
17	Do.	53	do.	30	30
18	Do.	13	do.	30	30
19	Do.	79	do.	30	25
20	Jaffna	1,608	Jaffna	14	14
21	Colombo	"Hindu Nurany"	Rayalpatam	15	15
22	Jaffna	1,701	Jaffna	12	20
23	Kilakarai	25	Kilakarai	13	13
24	Do.	107	do.	12	12
25	Do.	108	do.	18	18
26	Do.	105	do.	16	15
27	Do.	55	do.	13	12
28	Do.	95	do.	15	15
29	Do.	146	do.	15	15
30	Do.	7	do.	12	12
31	Do.	126	do.	12	11
32	Do.	74	do.	10	10
33	Do.	35	do.	16	16
34	Do.	83	do.	12	12
35	Jaffna	1,739	Arabs	20	20
36	Do.	1,658	do.	12	12
37	Do	1,639	Erukkalampiddi	10	10
38	Kilakarai	141	Kilakarai	18	18
39	Do.	144	do.	11	11
40	Jaffna	1,753	Jaffna	12	12
41	Kilakarai	15	Kilakarai	15	15
42	Jaffna	7	Jaffna	10	10
43	Tuticorin	9	Tuticorin	31	30
44	Kilakarai	1	Kilakarai	18	18
45	Do.	106	do.	14	14
46	Do.	4	do.	16	16
47	Do.	4	do.	15	15
48	Do.	46	do.	10	10
49	Do.	133	do.	14	14
50	Do.	21	do.	15	15
51	Do.	130	do.	12	11
52	Do.	17	do.	20	20
53	Do.	49	do.	13	13
54	Do.	96	do.	12	12
55	Do.	104	do.	12	12
56	Do.	5	do.	20	20
57	Do.	79	do.	12	12
58	Do.	132	do.	12	12
59	Do.	150	do.	12	12
60	Do.	52	do.	10	10
61	Do.	3	do.	10	10
62	Tuticorin	11	Tuticorin	20	20
63	Kilakarai	102	Kilakarai	14	14
64	Paumben	61	Paumben	12	12
65	Tondi	40	Tondi	12	12
66	Tuticorin	2	Tuticorin	18	18
67	Kilakarai	36	Kilakarai	14	14
68	Do.	24	do.	10	10
69	Do.	1	do.	15	10
70	Do.	4	do.	14	14
71	Do.	84	do.	11	11
72	Paumben	94	Paumben	12	12
73	Kilakarai	1727	Kilakarai	12	12
74	Do.	"Thahool-Hamid Bux"	do.	16	16
75	Do.	147	do.	9	9
76	Tuticorin	5	Tuticorin	27	27
77	Paumben	84	Paumben	12	13
78	Jaffna	1,627	Jaffna	14	14
79	Paumben	78	Paumben	12	12
80	Kilakarai	138	Kilakarai	12	12
81	Paumben	9	Paumben	21	21
82	Kilakarai	127	Kilakarai	10	10
83	Do.	75	do.	10	10
84	Do.	143	do.	12	12
85	Paumben	19	Paumben	11	10
86	Tuticorin	67	Tuticorin	27	27

Annexure IV.—*contd.*

Fishery No.	Description and Number of Boat.		Places to which Divers, &c., belong.	Divers.	Manducks.
87	Kilakarai	1,734	Kilakarai	11	11
88	Do.	152	do.	14	14
89	Tuticorin	"Josephena"	Tuticorin	23	23
90	Kilakarai	112	Kilakarai	12	12
91	Do.	10	do.	15	15
92	Do.	29	do.	15	15
93	Do.	30	do.	17	18
94	Do.	"Thahool Hamid"	do.	23	23
95	Do.	28	do.	12	12
96	Do.	2	do.	10	10
97	Do.	131	do.	16	16
98	Do.	139	do.	14	14
99	Do.	1	do.	20	20
100	Do.	145	do.	12	12
101	Jaffna	1,742	Jaffna	20	20
102	Kilakarai	11	Kilakarai	10	10
103	Do.	108	do.	10	10
104	Do.	22	do.	13	13
105	Do.	32	do.	14	14
106	Do.	135	do.	12	12
107	Do.	7	do.	10	10
108	Do.	134	do.	13	13
109	Do.	100	do.	12	12
110	Do.	129	do.	12	12
111	Tuticorin	33	Tuticorin	22	22
112	Mannar	1,560	Mannar	12	12
113	Kilakarai	47	Kilakarai	10	10
114	Do.	82	do.	12	12
115	Do.	34	do.	10	10
116	Erukkalampiddi	13	Erukkalampiddi	12	12
117	Kilakarai	24	Kilakarai	10	10
118	Do.	8	do.	16	16
119	Erukkalampiddi	1,553	Erukkalampiddi	12	12
120	Do.	17	do.	12	12
121	Do.	1,512	do.	12	12
122	Do.	1,667	do.	12	12
123	Do.	1,648	do.	12	12
124	Kilakarai	8	Kilakarai	16	16
125	Do.	1,613	do.	12	12
126	Paumben	65	Paumben	8	8
127	Do.	22	do.	9	8
128	Do.	1	do.	11	10
129	Do.	27	Kilakarai	12	12
130	Do.	68	Paumben	12	12
131	Do.	27	do.	27	27
132	Do.	108	do.	9	9
133	Erukkalampiddi	1,550	Erukkalampiddi	7	7
134	Jaffna	833	do.	20	7
135	Kilakarai	2	Kilakarai	16	16
136	Paumben	75	Paumben	15	15
137	Erukkalampiddi	27	Erukkalampiddi	16	16
138	Kilakarai	136	Kilakarai	10	10
139	Erukkalampiddi	1	Erukkalampiddi	14	14
140	Jaffna	1,490	Jaffna	12	12
141	Do.	1,502	do.	12	12
142	Tuticorin	65	Tuticorin	18	18
143	Paumben	72	Paumben	8	8
144	Do.	69	do.	12	12
145	Do.	9	do.	18	18
146	Do.	4	do.	14	14
147	Kilakarai	103	Kilakarai	12	12
148	Paumben	40	Paumben	15	15
149	Kilakarai	146	Kilakarai	10	10
150	Do.	98	do.	9	9
151	Do.	17	do.	12	12
152	Do.	34	do.	8	8
153	Do.	128	do.	10	10
154	Paumben	79	Mannar	10	10
155	Do.	1,638	do.	17	17
156	Do.	109	Paumben	10	10
157	Kilakarai	1	Kilakarai	16	16
158	Do.	16	do.	18	18
159	Paumben	38	Paumben	8	8
160	Kilakarai	10	Kilakarai	9	9
161	Do.	137	do.	10	10
162	Do.	91	do.	15	15
163	Do.	18	do.	15	15
164	Paumben	"Ahamadia"	Paumben	22	22
165	Kilakarai	1	Kilakarai	16	16
166	Do.	99	Naripur	15	15
167	Tuticorin	7	Tuticorin	34	33
168	Do.	18	do.	30	30
169	Kilakarai	97	Naripur	15	15
170	Paumben	85	Kilakarai	15	15
171	Tuticorin	4	Tuticorin	29	28
172	Kilakarai	46	Kilakarai	18	17
173	Paumben	53	do.	8	8
174	Karaim (Jaffna)	38	Jaffna	12	12

Annexure IV.—*contd.*

Fishery No.	Description and Number of Boat.		Place to which Divers, &c., belong.	Divers.	Manducks.
175	Paumben	114	Paumben	13	12
176	Do.	86	do.	25	25
177	Do.	91	do.	15	15
178	Tuticorin	24	Tuticorin	15	15
179	Paumben	56	Paumben	5	5
180	Vempur	1	Vempur	11	10
181	Kilakarai	41	Kilakarai	10	10
182	Paumben	44	Paumben	10	10
183	Do.	47	do.	13	13
184	Kilakarai	47	Kilakarai	26	26
185	Vempur	6	Vempur	15	15
186	Paumben	1,134	Paumben	28	27
187	Do.	3	do.	22	22
188	Do.	4	do.	10	10
189	Jaffna	113	Jaffna	10	10
190	Do.	1,607	Kilakarai	12	12
191	Do.	4	Tuticorin	20	20
192	Paumben	2	Paumben	21	21
193	Do.	40	do.	7	7
194	Do.	64	Arabs	22	22
195	Do.	6	Kilakarai	22	22
196	Do.	10	do.	13	12
197	Do.	25	do.	15	15
198	Do.	112	do.	26	25
199	Do.	20	do.	23	22
200	Do.	37	do.	15	15
201	Do.	5	do.	14	14
202	Do.	60	Paumben	28	29
203	Tuticorin	31	Tuticorin	32	31
204	Paumben	200	Paumben	15	15

Annexure V.

Statement in Marichchikaddi of Divers, Manducks, Families, &c.

Name of Place.	Divers.	Manducks.	Children. Women	Children. Male.	Children. Female.	Total.
Kilakarai	1,259	1,259	22	14	Nil	2,554
Tuticorin	449	449	374	191	118	1,581
Pumben	218	218	15	4	Nil	455
Tondi	45	45	Nil	Nil	Nil	90
Mandapam	158	158	—	11	—	327
Devipatam	27	27	—	—	—	54
Kayelpatam	31	31	—	2	—	64
Vempur and Naripur	57	57	9	4	—	127
Arabs	258	32*	—	—	—	290
Jaffna	128	128	—	13	—	269
Erukkalampiddi	250	220*	—	12	—	482
Total	2,880	2,624	420	251	118	6,293

* And coolies.

Annexure VI.

Statement showing the Result of the Fishery.

Banks fished.	Number of Fishing Days.	Oyster fished. Government Share.	Oyster fished. Divers' Share.	Oyster fished. Total.	Average Price at which the Oysters were sold per 1,000.	Price per 1,000 of Sample of February and March, 1904.	Total Proceeds of Oysters (Government Share).
					Rs. c. Rs. c.	Rs. c.	Rs. c.
South-West Cheval	25	21,084,405 312,825* 4,455†	10,542,203	31,626,608	15 0 to 69 69	36 0	889,463 72
North-West Cheval	5	2,880,345 615*	1,440,172	4,320,517	38 32 to 52 14	33 75	79,423 70
Mid-West Cheval	2	1,838,030 14,565*	919,015	2,757,045	25 29 to 36 45	20 25	56,135 8
Mid-West and South-West Cheval	1	1,334,970	667,485	2,002,455	22 22	—	29,672 28
Total	33	27,470,210	13,568,875	40,706,625 332,460‡	—	—	1,054,694 78
				41,039,085			

* Dredged oysters. † By Government divers. ‡ Dredged or fished by Government divers.

Annexure VII.

Abstract for 33 Days' Fishing.

				Rs.	c.
955,000	oysters at Rs.	12	per 1,000 ...	11,460	0
455,445	do.	13	do. ...	5,920	79
10,000	do.	14	do. ...	420	0
28,000	do.	15	do. ...	140	0
941,000	do.	18	do. ...	16,938	0
220,000	do.	19	do. ...	4,180	0
30,000	do.	20	do. ...	600	0
1,128,000	do.	22	do. ...	24,816	0
491,000	do.	23	do. ...	11,293	0
155,970	do.	24	do. ...	3,743	28
911,745	do.	25	do. ...	22,793	63
978,735	do.	26	do. ...	25,447	11
461,000	do.	27	do. ...	12,447	0
194,990	do.	28	do. ...	5,459	72
13,000	do.	29	do. ...	377	0
1,458,939	do.	30	do. ...	43,768	17
414,000	do.	31	do. ...	12,834	0
324,600	do.	32	do. ...	10,368	0
338,390	do.	33	do. ...	11,166	87
79,450	do.	34	do. ...	2,701	30
501,000	do.	35	do. ...	17,535	0
1,091,125	do.	36	do. ...	39,280	50
487,000	do.	37	do. ...	18,019	0
3,612,509	do.	38	do. ...	137,275	33
192,000	do.	39	do. ...	7,488	0
858,000	do.	40	do. ...	34,320	0
449,337	do.	41	do. ...	18,422	81
902,905	do.	42	do. ...	37,922	0
318,000	do.	43	do. ...	13,674	0
237,000	do.	44	do. ...	10,428	0
302,755	oysters at Rs.	45	per 1,000 ...	13,623	98
176,000	do.	46	do. ...	8,096	0
230,000	do.	47	do. ...	10,810	0
37,205	do.	48	do. ...	1,785	84
10,500	do.	49	do. ...	514	50
581,000	do	50	do. ...	29,050	0
648,655	do.	51	do. ...	32,979	40
1,987,905	do.	52	do. ...	103,371	6
1,268,000	do.	53	do. ...	67,205	6
339,830	do.	54	do. ...	18,350	82
1,471,990	do.	55	do. ...	80,959	45
703,000	do.	56	do. ...	39,368	0
145,565	do.	57	do. ...	8,197	20
647,695	do.	58	do. ...	37,566	31
111,000	do.	59	do. ...	6,549	0
429,000	do.	60	do. ...	25,740	0
81,000	do.	61	do. ...	4,941	0
17,000	do.	62	do. ...	1,054	0
1,000	do.	63	do. ...	63	0
3,000	do.	65	do. ...	195	0
6,400	do.	66	do. ...	422	40
2,000	do.	67	do. ...	134	0
11,875	do.	68	do. ...	807	50
5,000	do.	70	do. ...	350	0
8,000	do.	72	do. ...	576	0
2,000	do.	76	do. ...	152	0
6,000	do.	80	do. ...	480	0
1,275	do.	90	do. ...	114	75
27,470,410				1,054,694	78

Average per 1,000 Rs. 38·39.

Annexure VIII.

Statement of Oysters showing the quantity fished, Government share, quantity dredged, shares at which the Oysters were sold per 1,000, average per 1,000, and amount realized by Government.

Date.	Day of Fishing.	No. of Boats.	Quantity of Oysters fished.	Government Share.	Quantity dredged.	Rates sold at per 1,000.	Average Rates.	Amount realized of Government Share.
1904.							Rs. c.	Rs. c.
March 10	—	—	—	—	117,537	Rs. 30, 38	37 65	4,425 37
Do. 15	1	12	273,735	182,490	46,010	Rs. 49, 50, 52, 55, 60, 61, 63, 65, 67, 76, 80 ...	50 90	11,631 50
Do. 16	2	30	628,342	418,895	28,000	Rs. 40, 41, 42	40 42	18,066 69
Do. 17	3	45	854,790	569,860	37,100	Rs. 42, 43, 45, 46, 48 ...	42 36	25,713 20
Do. 18	4	90	1,231,680	821,120	—	Rs. 44, 50, 52, 53, 55, 57, 58 ...	51 50	42,295 36
Do. 19	5	149	1,727,250	1,151,500	10,400	Rs. 52, 53, 54	52 29	60,758 70
Do. 20	6	152	1,619,385	1,079,590	10,400	Rs. 53, 55, 56	54 37	59,269 45
Do. 21	7	192	1,603,223	1,068,815	20,880	Rs. 55, 56, 57, 58 ...	55 76	60,766 31
Do. 22	8	195	1,717,897	1,145,265	9,300	Rs. 53, 55, 56, 57, 58, 59, 60 ...	56 53	65,271 20
Do. 23	9	199	2,393,783	1,595,855	—	Rs. 38, 40, 41, 42, 43, 44, 46, 48, 51, 52	41 6	66,541 49
Do. 24	10	198	1,727,700	1,151,800	13,325	Rs. 34, 35, 36, 37, 38, 39, 40, 43	36 21	42,196 50
Do. 25	11	195	1,508,857	1,005,905	8,000	Rs. 38, 40, 41, 42 ...	39 53	39,080 0
Do. 26	12	202	2,252,573	1,501,715	3,531	Rs. 38, 39, 40, 41 ...	38 42	57,978 34
Do. 28	13	201	2,167,612	1,445,075	—	Rs. 30, 31, 32, 35, 38 ...	30 98	44,624 25
Do. 29	14	202	1,808,985	1,205,990	—	Rs. 26, 27, 28, 29, 30 ...	26 75	32,269 72
Do. 30	15	201	1,315,380	876,920	1,522	Rs. 38, 40, 41, 42, 43 ...	40 60	35,662 12
Do. 31	16	201	1,247,745	831,830	1,275	Rs. 53, 54, 55, 56, 90 ...	54 13	45,098 57
April 1	17	173	1,595,310	1,063,548	—	Rs. 20, 30, 31, 32, 33, 34, 35, 37	32 38	34,445 36
Do. 2	18	199	3,905,850	2,603,900	5,545	Rs. 12, 13, 14, 15, 18, 19.. ...	15 0	39,058 79
Do. 4	19	199	1,878,270	1,252,180	615	Rs. 43, 45, 46, 47, 50, 53, 57, 60, 61, 62	52 14	65,328 78
Do. 5	20	202	956,483	637,655	—	Rs. 51	51 0	32,520 40
Do. 6	21	13	26,100	17,400	—	Rs. 66, 68, 70, 80 ...	71 28	1,240 40
Do. 10	22	169	541,807	361,205	—	Rs. 38, 46, 48	38 32	13,843 84
Do. 11	23	151	917,858	611,905	—	Rs. 52	52 0	31,819 6
Do. 12	24	187	1,230,555	820,370	10,860	Rs. 33, 35, 36, 38, 42 ...	36 45	30,303 59
Do. 13	25	156	1,532,047	1,021,365	—	Rs. 25, 26, 28, 32 ...	25 29	25,831 49
Do. 14	26	175	1,996,898	1,331,265	3,705	Rs. 20, 22, 23, 24 ...	22 22	29,672 28
Do. 15	27	30	293,617	195,745	—	Rs. 25, 32	26 78	5,243 63
Do. 16	28	70	993,555	662,370	—	Rs. 23, 26	23 91	15,841 62
Do. 19	29	—*	28,313	18,875	—	Rs. 68, 72	69 69	1,315 50
Do. 20	30	23†	286,537	191,025	—	Rs. 33, 35, 36	34 93	6,673 83
Do. 21	31	13	198,203	132,135	—	Rs. 33	33 0	4,360 45
Do. 22	32	4†	92,865	61,910	—	Rs. 34, 35, 36, 37, 40 ...	37 71	2,334 94
Do. 23	33	11‡	153,420	106,735	—	Rs. 30, 35	30 9	3,212 5
			40,706,625	27,142,205	328,005			1,054,694 78
			328,005§	—				
			4,455‖	328,005				
			41,039,085	27,470,210				

* "Ready" and "Serendib." † And "Serendib." ‡ And Government divers.
§ Dredged oysters. ‖ By Government divers.

Annexure IX.

Statement showing the Names of Towns and Villages from which People have come to purchase Oysters and the Number purchased by them in the Government Thoddi.

Names of Towns and Villages.		Quantity purchased.	Total.
CEYLON.			
Northern Province.			
Jaffna		1,151,205	
Mannar		479,537	
Vidattaltivu		17,000	
Marichchikkaddi		13,000	
Silavaturai		5,000	
	Total for the Province ...	———	1,665,742
Other Provinces.			
Colombo		682.485	
Kandy		10,000	
Moratuwa		5,000	
Matale		5,000	
Calpentyn		3,000	
Puttalam		3,000	
Dikoya		2,000	
	Total for other Provinces ...	———	710,485
Grand Total for the Island		—	2,376,227
INDIA.			
Madras Presidency.			
Ramnad ...	Chetty caste and Moormen ...	7,180,255	
Madura	Chetty	5,108,761	
Kilakarai ...	Moormen	3,148,150	
Paumben ...	Chetty and Moor ...	1,401,170	
Paramakudi ...	Chetty... ...	1,134,000	
Trichinopoly ...	Chetty, other Tamils, and Moormen ...	1,013,320	
Hayatpatanam ...	Moormen	593,125	
Kumbakonam ...	Chetty	540,000	
Nambuttalai ...	Moormen	503,000	
Madras	Chetty	501,620	
Tondi	Moormen	441,500	
Tevakoddai ...	Chetty	433,795	
Adirampattam ...	Moormen	425,735	
Pandikudi ...	Chetty	260,000	
Iliyankudi ...	Chetty caste and Moormen ...	202,105	
Mulaippali ...	Nadar	115,000	
Karaikkudi ...	Chetty	115,000	
Kottakudi ...	Chetty	94,500	
Kulasekarampatnam ...	Moormen	90,000	
Putumadam ...	Moormen	90,000	
Vetalai	Moormen	86,000	
Valaiyadi	Nadar and Chetty ...	75,000	
Tuticorin	Moormen and Parawa caste ...	71,000	
Kenkaikondan ...	Tamil of various castes ...	67,445	
Kamuti	Nadar	61,000	
Peremali	Nadar	61,000	
Chakkaraikoddai ...	Moormen	58,000	
Tirunelveli ...	Nadar	49,000	
Vaneyampadi ...	Moormen and Chetty ...	48,000	
Panduruddi ...	Moormen	41,000	
Kallurani	Chetty and other Tamils ...	35,000	
Karikkal	Nadar	35,000	
Negapatam ...	Tamils of various castes ...	32,000	
Periyakulam ...	Asari and Chetty ...	30,000	
Tirumalaiappapuram ...	Nadar	26,000	
Vaddakur ...	Chetty	26,000	
Toppur	Moormen	25,000	
Tiruvalur ...	Chetty and other Tamils ...	22,000	
Vayatpadi ...	Chetty	20,000	
Virapandianpatnam ...	Tamils of various castes ...	20,000	
Malati	Nadar	18,000	
Chonakanvali ...	Nadar and other Tamil castes ...	17,000	
Tiruppullani ...	Tamils	15,000	
Tedruttaravai ...	Moormen	12,000	
Chivakasi	Nadar	11,000	
Pommapeddai ...	Reddi	11,000	
Karisaikkulam ...	Tamils of various castes ...	10,000	
Eral	Tamils	10,000	
Tiripuram ...	Tamils	10,000	
Periyapatnam ...	Asari	10,000	
Ekkarkudi ...	Moormen	10,000	
Marakkairpatnam ...	Moormen	9,000	
Chitamparam ...	Tamils	9,000	
Mandapam ...	Tamils	9,000	
Tanjore	Tamils and Moormen ...	8,905	
Melaikkanam ...	Tamils	8,000	
Mandalamanikkam ...	Chetty	8,000	
Ammapatam ...	Nadar	7,000	
Makilninrapuram ...	Moormen ...	7,000	
Rameswaram ...	Moormen	7,000	
Aliyankulam ...	Moormen	6,000	

Annexure IX.—*contd.*

Names of Towns and Villages.			Quantity Purchased.	Total.
Devipatam	... Moormen and Chetty	...	5,000	
Point Calmere	... Moormen	... ...	5,000	
Kinattankaraivalai	... Tamils	... ...	5,000	
Kilepputukkadu	... Nadar	... ...	5,000	
Teruvadanai	... Nadar	... ...	5,000	
Mulaikkudi	... Nadar	... ...	5,000	
Pallipputtur	... Tamils	... ...	5,000	
Seramankalam	Moormen	... ...	5,000	
Kovaikkulam	... Nadar	... ...	4,000	
Musalippatam	... Moor	... ...	4,000	
Amparpuram	... Nadar	... ...	4,000	
Koyitpiddi	... Nadar	... ...	4,000	
Chivalaimankulam	... Tamils	... ...	3,000	
Alakankulam	... Moormen	... ...	3,000	
Cholakiri ...	... Tamils	... ...	3,000	
Arunukaveri	... Nadar	... ...	3,000	
Mallipatnam	... Moormen	... ...	3,000	
Chevalai ...	... Moormen	... ...	2,000	
Siruvilliputtur	... Chetty	... ...	2,000	
Saiyatkudi	... Nadar	... ...	2,000	
Aiyakudi ...	... Tamils	... ...	2,000	
Kanam ...	... Nadar	... ...	2,000	
Pallippoddai	... Tamils	... ...	2,000	
Cheddiarkoddai	... Tamils	... ...	2,000	
Putuvayal	... Tamils	... ...	2,000	
Tiruvenkadu	... Tamils	... ...	1,000	
Putukkudi	... Chetty	... ...	442	
	Total for the Madras Presidency	...		24,580,328
	Other parts of India.			
Bombay ...	... —	... ...	270,655	
Secundrabad	... Chetty	... ...	60,000	
Calcutta ...	... —	... ...	1,000	
	Total for other parts of India	...		331,655
	Total for India	... ...		24,911 983
	Other parts of the World.			
London ...	...	...	160,000	
Mecca ...	...	...	22,000	
	Total for other parts of the World	...		182,000
	Grand Total	...		27,470,210

Annexure X.

Statement of Oysters exported during the Pearl Fishery of 1904.

Place to which exported.	Number of Oysters.
Kilakarai	225,000
Tuticorin	319,000
Paumben	716,700
Colombo	2,219,468
Negombo	29,200
Galle	31,895
Chilaw	21,950
Panadure	31,200
Beruwala	4,890
Kalutara	2,600
Calpentyn	65,800
Mannar	57,900
Jaffna	65,150
	3,790,752

Annexure XI.

Census on the Night of March 31, 1904, Marichchikaddi Pearl Fishery.

Sections.	Ceylon.		Indian.		Other Countries.		Total		Grand Total.
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Souls.
Main street	458	16	3,246	349	12	—	3,716	365	4,081
Customs Seabeach ...	1,130	29	243	—	—	—	1,373	29	1,402
Tank street, Diver's street, and Police	608	18	316	27	4	—	928	45	973
New and Old Moor streets, Field street, and coolies ...	123	—	621	11	—	—	744	11	755
Medical Department ...	27	—	6	—	—	—	33	—	33
Mullikulam street ...	423	36	52	7	—	—	475	43	518
Divers' quarters ...	332	—	6,949	—	205	—	7,486	—	7,486
Private Thoddies ...	54	—	1,573	—	—	—	1,627	—	1,627
Kottu staff and quarters ...	419	—	9	—	—	—	428	—	428
Chetty street ...	83	—	965	—	4	—	1,052	—	1,052
Private houses ...	76	—	4	—	10	—	90	—	90
	3,733	99	13,984	394	235	—	17,952	493	18,445

Annexure XII.

Drinking Water Tank, Marichchikaddi.

Surface area on 24th March, 1904, 51,875 square yards.

Taking the water at an average depth of three feet, a very moderate not to say low estimate, but the one which, in ignorance of the levels of the tank bed, I prefer to take to avoid overestimating the supply, this will give 51,875 cubic yards of water.

Evaporation at half an inch of surface per diem=720 cubic yards over the whole area. As this area will decrease owing to long stretches of shallow water at the edges which will rapidly dry up by the end of the month, the evaporation would be very much less.—I should say one-third less at least (probably more), so I deduct one-third of the evaporation or, to simplify matters, take the evaporation for twenty days instead of thirty which gives 14,400 cubic yards of evaporation. This leaves 37,475 cubic yards available. This gives 1,011,825 cubic feet or 6,323,906 gallons of water. On the 24th March the population was estimated at 15,000 with a prospect of a rise to 30,000, I therefore take 20,000 as the average for a month or 600,000 for thirty days.

Allowing 8 gallons a day for each individual, a very liberal allowance for drinking and cooking purposes only, this would give 4,800,000 gallons consumed, leaving a balance of 1,523,906 gallons or, allowing for evaporation, another ten days supply of water.

Annexure XIII.

Number and Nature of Offences of Cases instituted in the Fishery Camp between March 14 and April 26, 1904.

Nature of Offence.	Number of Cases.	Number of Persons.
Nuisance, Ordinance No. 16 of 1865	34 ...	83*
Theft, section 369, Penal Code	6 ...	5
Theft, section 367, Penal Code	11 ...	14
Theft by servant, section 370, Penal Code	2 ...	2
Affray, section 157, Penal Code	18 ...	36
Bhang, Ordinance No. 5 of 1899	4 ...	4
Drunk, Ordinance No. 12 of 1891	20 ...	23
Fouling water, section 270, Penal Code	10 ...	13
Vagrant, Ordinance No. 4 of 1841	4 ...	7
Gaming, Ordinance No. 17 of 1889	7 ...	10
Assault, section 344, Penal Code	1 ...	2
Criminal Breach of trust, section 389, Penal Code ...	2 ...	2
Hurt, section 314, Penal Code	12 ...	22
Criminal misappropriation, section 386, Penal Code ...	2 ...	2
Being found in a building for unlawful purpose, section 450, Penal Code	1 ...	1
Mischief, section 409, Penal Code	1 ...	2
Attempt to commit theft, section 490, Penal Code ...	1 ...	1
Unnatural offence, section 365, Penal Code	1 ...	1
Total ...	137 ...	230

* Last year the separate cases were instituted against each person under this charge.

Annexure XIV.

Port of Pukulam.

Statement of Customs Revenue Collected at the Port of Pukulam during the Pearl Fishery from March 11 to April 29, 1904.

Head of Receipts.	Amount. Rs. c.	Total. Rs. c.
Imports.		
Grain	191 30	
Cotton manufacture	60 67	
Sugar	29 66	
Kerosine oil	8 0	
Other goods	31 64	
		321 27
Warehouse Rent.		
Single rent	16 93	
Double rent	3 36	
		20 29
Port Dues.	—	478 44
		820 0

Annexure XV.

Statement of Sale of Sample Pearls, &c., sold at Marichchikaddi on March 31 and April 16 and 21, 1904.

No. of Lot.	Particulars.	Name of Bank.	Estimated Value.	Amount of Sale.
			Rs. c.	Rs. c.
1	Sample pearls of February, 1904 ...	North-West Cheval Paar ...	243 0	
2	Do. ...	South-West Cheval Paar ...	432 14	1,210 93
3	Sample pearls of January, 1904 ...	Do. ...	80 3	
4	Do. ...	Mid-West Cheval Paar ...	121 50	
5	Confiscated pearls ...	— ...	542 0	800 0
			1,418 67	2,010 93

No. 2.

The INSPECTOR OF PEARL BANKS to the Hon. the COLONIAL SECRETARY, Colombo.

Pearl Banks, Ceylon,
May 7, 1904.

SIR,—I HAVE the honour to submit the following report on the inspection of the Pearl Banks in February and March, 1904, and upon the Fishery which followed thereafter :—

INSPECTION OF PEARL BANKS.

On the 18th February, preparations for inspection being complete, I left Colombo for the Pearl Banks in the native barque "Mohideen Bux" in tow of the dredging steamer "Ready."

On arrival at Marichchikaddi on the morning of the 20th no Government divers had arrived. The next day seven Mannar divers having put in an appearance, I resolved that the urgency of immediate inspection was too great to permit waiting longer for these laggards and left at 6.40 A.M. to do the best possible with these few men—half the usual complement. The first step was to locate Captain Donnan's sunken tanks marking the shoal buoy position on the tail of Karaitivu shoal, and I was so fortunate as to find them within 10 minutes after anchoring on the place where I reckoned them to be according to the bearings of landmarks ashore. After laying down a large beacon buoy, as is usual at the beginning of inspections, I then proceeded and took up my first inspection position at the centre of the South-West Cheval Paar.

The inspection of the Cheval, Vankali, and Moderagam Paars occupied me from the 23rd February to the 6th March inclusive, the Karaitivu and Dutch Moderagam Paars occupied March 11th and 12th respectively, while the 14th March was devoted to the Periya Paar. In addition to this regular inspection, I utilized the "Ready" to dredge outside the recognized paar limits, *i.e.*, between the banks.

The results may be summarized thus :—

Cheval Paar : Fishable Oysters.—The beds of 2½ to 3 years old oysters on the Western Cheval (South-West, Mid-West, and North-West sections), which I saw for the first time in February, 1902, were found to have the same general disposition, but to have largely decreased in area and to be represented by several detached patches thickly covered with 4½ to 5 year olds on the South-West Cheval ; by a large one of more thinly spread oysters of the same age on the North-West section, and by a third of rather smaller extent on the Mid-West, the southern end of the last-named joining the north-west patch on the South-West section (see sketch-plan annexed).

The South-West patches covered in the aggregate an area of 2,754,021 square yards with an average of 22 oysters per dive on 1,778,676 square yards and of 21 on the remainder. As each dive is estimated to account for an area of 3 square yards, I estimated the total number of oysters on this section to be 19,500,000, sufficient to give daily loads of 10,000 oysters per boat to a fishing fleet numbering 100 boats for a period of 19½ days.

The oysters on the North-West section amounted to 9,000,000, covering an area of 1,685,460 square yards, a number based upon an average of 20 oysters per dive on 716,100 square yards and 13 per dive on 969,360 square yards. Although apparently sufficient to give fishing for 100 boats for 9 days at an average load per boat of 10,000 oysters, the result of the fishery showed that the number of oysters per dive on certain portions of this bed was too low to give profitable fishing results, with the consequence that the fleet had to be moved after only five days' fishing and the removal of a little over 4 millions of the oysters—rather less than half of those present.

The bed on the Mid-West had an area of 992,250 square yards whereon I estimated there were 6,500,000 oysters being at the rate of 20 per dive. These oysters were smaller for their age than either the South-West or the majority of the North-West. Along the east margin they were much commingled with oysters of 2 to 2½ years of age.

The total number of fishable oysters on the three sections of the Western Cheval I estimated at 35,000,000 equal to thirty-five days' fishing for 100 boats.

Cheval and Moderagam Paars : Immature Oysters.—Immense quantities of immature oysters, varying from 2 to 2½ years old, covered practically the whole space on the eastern half of the Mid and North-West sections extending eastwards into the North-Central, Central, and South-Central areas. The South and the South-East Cheval also bear very large quantities, as do also the North and the South Moderagams.

The size of those on the two latter paars and those on South, South-East, and South-Central is greater than that of those upon the remaining sections, indicating more vigorous growth and a better food supply. Indeed many of the oysters have a superficial appearance of being $3\frac{1}{2}$ years old. The general superiority of these oysters is well brought out in the following tabulation of the average size of respective oysters from each of the localities named :—

Locality.	Depth. mm.		Length. mm.		Breadth. mm.
South-Central Cheval	$67\frac{3}{25}$	×	$61\frac{4}{25}$	×	$27\frac{6}{25}$
North-West Cheval	56	×	$51\frac{4}{5}$	×	$23\frac{13}{15}$
North-West Cheval (another locality)...	$61\frac{1}{3}$	×	$57\frac{1}{2}$	×	$23\frac{3}{4}$
Mid-West Cheval	$56\frac{3}{5}$	×	$52\frac{3}{5}$	×	$24\frac{3}{5}$
South Moderagam	$68\frac{17}{25}$	×	$64\frac{4}{25}$	×	$27\frac{7}{25}$

These are few oysters of an age less than two years mixed with these—an important favourable factor, as the fall of abundant spat upon a bed of oysters approaching maturity is one of the most serious dangers that beset the fruition of an oyster bed, and one that is most difficult to combat.

Outer Vankali Paar.—This paar, which was estimated to bear 3,450,000 oysters in March, 1902, was found bare of oysters so far at least as I was able to ascertain in the absence of beacon-marks sufficiently distinct to verify the position with the needful accuracy. Indeed, till a beacon be erected on Aripu coral reef or on land at the site of the Doric (the former preferably) I doubt the possibility of correctly locating this seaward paar, at consecutive inspections, distant as it is $14\frac{1}{2}$ miles from shore. Present landmarks are practically indistinguishable, and the advantage of one on the reef named being 5 miles nearer the outer bank than any point on the mainland, cannot be exaggerated, especially as marks on shore, though theoretically they should be visible, are frequently not so in actuality, owing to haze over the land.

Great quantities of black Holothurians (Bêche-de-mer) were found in the neighbourhood of the Vankali Paar and appear to be characteristic of this region.

Periya Paar.—The 14th March was devoted to an inspection of this great bank, with the result that an immense bed of oyster spat was discovered. The young oysters were incredibly abundant, densely spread over an area fully five miles in length by from one to one and a half mile in width. The age was under three months, so that they must have been spatted not earlier than December of 1903. Alike on sandy and rocky ground was this profusion found, but on the rocky ground the numbers were notably greater. On the sandy stretches the spat formed bunches often of large size, the oysters attached to one another, but generally with a nuclear fragment of small cultch, usually either a cockle shell, a nullipore ball, or a small fragment of "paar."

The spinning mussel (*Modiola barbata*), "suran" as it is called by the Tamil divers, was in places abundant, especially upon some of the sandy ground, but not sufficiently so as to constitute a grave danger to the bed.

This discovery of spat paralleled in extent and nature that made by Professor Herdman in February, 1902, when he approximately estimated the numbers of the young oysters at one hundred thousand millions. These oysters, it will be remembered, had all disappeared by November of the same year, when I next re-examined the bank, and with this experience in my memory I requested Government to authorize me to carry out transplantation by dredging on as large a scale as possible during the entire month of April in order to form on suitable unoccupied ground on the East Cheval a bed of oysters fishable in 1908.

Karaitivu Paar.—In April, 1902, it was estimated that 25,330,000 oysters of from $1\frac{1}{2}$ to 2 years old occupied a bank on this paar. A year later, when I examined the bottom there by means of diving apparatus, I found that the large quantities of oysters present in 1902 had practically all disappeared. This year the character of the bank remained unchanged, being bare of oysters, save for a few handsful of 2 year olds.

Dutch Moderagam Paar.—A fair-sized bed plentifully covered with oysters is present on this paar, but they are too young to fish for at least a year, as the age of the majority varies from 2 to $2\frac{1}{2}$ years. These oysters represent the young spat which was noted as abundant in November, 1902; their growth has been at the expense of the older that were present that year, and which have been killed off by the more vigorous and numerous young.

Prospects of future Fisheries.—The prospects of a large fishery, both next year and in 1906, upon the Cheval and Moderagam Paars, are excellent; the immense quantities of young, 2 to $2\frac{1}{2}$ years old, occupying the Moderagams, the South-East, South, Mid-West, North-West, and the greater part of the three central blocks of the Cheval Paar are ample for two years' fishery. Those on the Moderagams, and on the South, South-East, and South-Central Cheval will, I hope, be fit to fish next March, being more advanced in growth than those on the Mid-West and North-West Cheval. Apart from this reason it will be advisable to fish the former at as early a date as the valuation of samples may show to be profitable, as many of the oysters on the beds named lie loose in bunches on a sandy bottom, and for that reason are more liable to mischance than those attached to rocky bottom. The oysters at present on the Muttuvaratu and the Dutch Moderagam should also be ready to fish in 1906, but I do not build confidently on this, as these oysters even now are stunted and sickly-looking, and are likely to decrease very largely ere ripe to fish.

Beyond 1906 or at latest 1907 there will be a more or less prolonged break in the fishery cycle, unless large measures of transplantation be resorted to, seeing there has been no fall of spat upon the Cheval, Moderagam, and Muttuvaratu Paars within the last two years.

False Spat.—Very frequently in the history of the pearl banks false hopes of future fisheries have been raised by the appearance on the banks of incalculable myriads of minute spat found usually clinging in multitudes to seaweeds and water plants either floating or rooted to the bottom. For long decades these were confounded with the true spat of the oyster, which they resemble closely. Critical examination has proved them to be the young of a small bivalve, closely allied to the pearl oyster, by name *Avicula vexillum*. Captain Steuart appears to have fallen frequently into the error of confounding this with pearl oyster spat, as he identified some of the *Avicula vexillum* spat when submitted to him after his retirement as being true pearl oyster spat. Mr. H. Sullivan Thomas, in

his valuable report to the Madras Government on the pearl fisheries of Tuticorin, went exhaustively into this question, and appropriately termed these minute shells "false spat."

This present season *Avicula vexillum* is extremely abundant, very young stages being found on fine algæ in four to five fathoms west of Karaitivu Island, while older stages up to three parts grown were dredged in wonderful abundance clinging to the fronds of *Halophila* on the sandy ground north-east of Aripu reef.

It is interesting to note that the figure purporting to represent oyster spat in Sir Emerson Tennant's "Sketches of the Natural History of Ceylon" in reality depicts faithfully the appearance of this "false spat," and is therefore misleading in respect to the true spat of the pearl oyster.

Valuation of Sample Oysters.—During the inspection of the Cheval I collected representative samples of mature oysters from the South-West, Mid-West, and North-West beds respectively. From the 7th to the 9th March I was engaged superintending the washing of these samples and the valuation of the pearls picked out. The results showed that the South-West oysters were the richest in pearls, the North-West following closely with the Mid-West unmistakably much poorer in yield.

The weight of the pearls per 1,000 oysters was very high in the case of those from the South-West; the average size of these oysters was considerably greater also, but with regard to the quality of the pearls, the North-West oysters contained a much greater proportion of "cyst-pearls" of excellent quality than those from the South-West, which owed their greater proportionate weight to a noteworthy abundance of muscle-pearls.

The following table will make this clear:—

Bed	Quantity.	Total Weight of Pearls.		Weight per 1,000.		Valuation per 1,000 Oysters.	Size of Oysters.
		Kalanchu.	Manchadi.	Kalanchu	Manchadi.		
						Rs. c.	
South-West Cheval	12,000	7	$13\frac{4}{16}$	—	12·76	36 1	$76\frac{1}{5} \times 69\frac{1}{5} \times 32\frac{8}{26}$ mm.
North-West Cheval	7,200	2	18	—	8·06	33 75	$72\frac{2}{3} \times 66\frac{1}{2} \times 31\frac{1}{2}$ „
Mid-West Cheval ...	6,000	2	$1\frac{2}{16}$	—	6·85	20 25	$76\frac{3}{4} \times 66\frac{1}{2} \times 31\frac{1}{2}$ „

I append a tabulation of the details of the series of valuation statements of sample oysters from 1854 to the present date, together with the detailed statements of the three samples valued this year. *Vide* Annexures V., VI., VII., and VIII.

Methods of Inspection.—In the localization of my positions I utilized not only the usual mathematical methods of taking the angular bearings of known landmarks ashore and of the shoal buoy, but combined with this certain methods based upon the biological and physical characters of the bottom with which I am now intimately familiar. In this way I was able to find my way about with a certainty which is impossible under the present imperfect and inadequate system of beacon marks by mathematical means alone.

Thus when, as happened several times, the beacons ashore were too distant or too indistinctly seen to provide exact angular bearings the character of the oysters and of the associated organisms, the depth of water and the nature of the bottom, enabled me to define my position with perfect exactitude. The results compel me to the opinion that from lack of the combination of these various methods of verification of position fisheries have been lost in the past, that some at least of the blank cycles were but apparently blank, that beds of oysters lived, flourished, and died without being found at the age when fishable, or alternatively were known when young and missed when mature. Quite apart from the adoption of methods of cultivation, I am convinced that inspections carried out on the scientific lines indicated above will do much to increase the number of future fisheries by rendering it impossible for oysters of mature age to be overlooked and to die off without being fished.

Nomenclature of the Cheval Paar.—I have definitely adopted in the present report that system of nomenclature for the different sections of the Cheval Paar which I proposed to and which has been approved by Professor Herdman. Besides being a present convenience, adherence to a fixed and carefully thought out scheme of nomenclature, coupled with properly defined limits to the sections, will go far to obviate vitiation of inference both in current work and in the historical deductions that will be made in future years by successive Inspectors. The sketch plan herewith will form a permanent record of the method of subdivision adopted in the case of the Cheval Paar—the largest and by far the most important of our pearl banks. *Vide* Annexure I.

I have subdivided this paar into three large divisions, the Western, Median, and Eastern. The Western comprises the South-West, Mid-West, and North-West sections or blocks, the Median the South, South-Central, Central, and North-Central, while the Eastern also consists of four subdivisions named respectively the South-East, Mid-East, North-East, and North. The Periya Paar Karai may be said to be a continuation to the north-north-west of the last named, while the northern limit of the North Moderagam Paar marches with the southern edge of the South-East Cheval.

Beacon Marks.—Apart from the large question of obtaining a specially constructed vessel for carrying out inspection work expeditiously and accurately, the chief requirements necessary to ensure reliable results lie in the improvement and increase in number of the beacon marks necessary to the finding of one's way about the banks, and to the permanent localization of such beds of pearl oysters as may be found from time to time.

As Sir William Twynam has said, "certain fixed, well-defined, unmistakable landmarks are much needed to which bearings may be taken from all parts of the banks." In his reports he reverts time after time to the vital importance of further good landmarks being erected, and he states his belief (page 20 of his 1902 report) that this want of adequate landmarks resulted in the wrong bank being fished in 1836, two beds of young oysters being fished instead. Again he states that the fishery of 1860 on the Moderagam was all but lost for the same reason, a long-continued search of three days being necessitated ere the bed was re-discovered.

Other instances might be cited, but I think that there are now none who having had practical acquaintance with the conditions which prevail at the inspection of the northern banks will hesitate to agree as to the necessity for still further improving the landmark scheme.

A notable advance was made this year by the erection of a permanent beacon on the tail of Karaitivu shoal, immediately to the south of the South Cheval Paar, to serve as the point of departure at the inspection of the whole Cheval area. Many years ago Captain Donnan sank an iron tank close to this spot, and subsequently he added a second. It was his custom at the beginning of each inspection to locate these tanks by bearings taken from Kutiramalai and by means of the inspection divers, and, when found, to mark the position temporarily during the inspection by a large beacon buoy—the so-called "shoal buoy." Sometimes, however, the sunken tanks could not be found, and the buoy had to be placed in a position which could at best be but approximately correct.

My predecessor Captain Legge, appreciating both the loss of time involved in this oft-recurrent hunt for sunken tanks and the danger existing of taking incorrect bearings when these tanks could not be located, requested sanction to have a permanent beacon erected. This was accorded, but all efforts to erect it last year were rendered futile by unfavourable weather. Before leaving for inspection this year I pressed upon the attention of Government the urgency and importance of another effort being made to place the beacon in position. Accordingly it was sent up once more under the care of Mr. Lindsay, the General Foreman of the Harbour Works Department, who after very great difficulties due to the heavy ground swell always present on the shoal, eventually completed the erection successfully. I am confident that thereby one great safeguard has been created against the loss by oversight of oyster patches in the Cheval region. It will also economize valuable time at inspections, and by that render further inestimable service. This Karaitivu shoal beacon consists of four iron piles driven 6 feet into the sand, braced together securely and bearing an iron telegraph pole secured by four wire stays. The apex of the pole bears two circular metal discs set vertically at right angles, the top of which is 43 ft. 6 in. above sea level, and therefore visible at a distance of 11½ miles to an observer whose eye is 12 feet above sea level. The depth of water where and when it was erected was 25 ft. 6 in. at low tide.

The position of the sunken tanks is latitude 8° 39′ 15″ N., longitude 79° 45″ E.; the new beacon is distant therefrom 233 ft. N. 3° W.

An elevation to scale, kindly supplied by Mr. J. H. Bostock, Resident Engineer, Colombo Harbour Works, is annexed. (*Vide* Annexure IV.) The beacon itself was constructed at the Government Factory to the plans of Mr. E. C. Davies, who with Mr. Bostock did everything possible to facilitate the work. Infinitely useful as this addition to the permanent pearl bank marks is, *others are urgently needed before we can say with confidence that risk of missing beds of oysters is rendered negligible.* My experience during the last two years, and especially during the last inspection, makes it clear to me that a beacon in the Aripu district together with an improvement, by heightening, of the present Kutiramalai beacon are essential to efficient inspections.

Regarding Kutiramalai beacon I may say at once that, admirable as its situation is, it lacks the needful height to render it visible at the distance it should be clearly observable. Time after time have I had to take bearings from the position I supposed it to occupy—the beacon itself was lost to view. To take bearings from a position one has to guess at is manifestly unsatisfactory considering what great financial issues depend upon accurate work, and I think the mere statement of this personal experience is evidence sufficient to justify the raising of the height of this beacon to a substantial extent.

To satisfy myself as to the best site in the neighbourhood of Aripu I paid a special visit to the district, taking measurements and observations at all likely spots. Of the positions on land, the site of the Doric ruin is unquestionably the best, as the ground level at the centre of the ruin is fully 19 feet above sea level and not marked by an environment of trees, as is the case with the Aripu sites. The foundations of the proposed beacon would be at least 100 feet from the edge of the cliff, an ample margin of safety in respect to marine erosion, which is here extremely slow as shown—among other evidences—by the fact that a portion of a gun emplacement, which originally stood at the edge of the cliff, still remains. Probably the rate of erosion is less than 10 or at the most 12 feet per century. However a beacon of 70 feet in height erected here would but just be visible at a distance of 15 miles viewed from 12 feet above the sea. As the Vankali Paar is this distance from land, and as a heat haze frequently hangs over the coast in the Aripu district obscuring landmarks, it occurred to me that a seamark of the nature of Karaitivu shoal beacon would be preferable, and I accordingly landed on and examined various parts of Aripu coral reef in search of a suitable site. Many advantages were at once apparent, the chief being that this position is 5 miles nearer the inspection ground and would not be affected and obscured by land haze. A subsidiary, though by no means unimportant, use it would serve would be as a channel mark for native craft going to and from Aripu and Vankali. At present a small mark—a pole with a tuft of leaves on top—is maintained by the natives for this purpose; a permanent and lofty mark would indeed be a boon to navigation and local trade.

Being 5 miles out to sea this site is but 10 miles from Vankali Paar, and hence a less height would be required than in the case of a beacon ashore. Were one to be placed here of the same height as Karaitivu shoal beacon, it would be visible a mile and a half beyond Vankali Paar. It would be theoretically more readily seen from that bank than one of 70 feet on the Doric site, and in practice this advantage would be intensified by its freedom from obscuration by land haze. Hence I have no hesitation in recommending a beacon on the reef in preference to any landmark.

Such a beacon could be erected without difficulty, and it should not be expensive. Certainly the troubles which beset the erection of Karaitivu beacon are non-existent here. I should say that probably the simplest plan of putting up such a mark would be to float a large caisson on to the reef at the top of a spring tide, fill with concrete, and rear a telegraph pole in the centre bearing a large circular disc at the extremity. The weight of the concrete would bed the caisson firmly in the growing coral of the reef, while the pole might be stayed from bent railway irons embedded in the concrete.

With respect to the cost I would point out that, whatever it might be, the amount would be as nothing compared with the loss of revenue entailed by the loss of a bank of fishable oysters through lack of proper beacon marks—a mischance which has occurred in the past probably oftener than we imagine.

At a later date the scheme of landmarks might be completed and perfected by the erection of a beacon at the Doric and by the raising of Kallar tower another 20 feet.

For the present, urgency centres in the raising of Kutiramalai tower and the erection of a beacon on Aripu reef.

REPORT ON THE PEARL FISHERY OF 1904.

Method of marking the Fishing Ground.—The opening of the fishery being advertised to take place on the 14th March, I took up a position on the south-east corner of the South-West Cheval the day preceding and marked out the ground for fishing.

The Government Agent notified the method by beat of tom-tom in the divers' quarters intimating that the boundaries of the fishing ground would be marked by buoys bearing red flags, while a series of white-flag buoys would be placed wherever fishable oysters were present. The divers were instructed to cluster their boats round the various white flags.

These oyster buoys were placed according to the distribution of oysters mapped out during the inspection, but to guard against the possibility of mistake I verified the abundance of oysters at the selected spots by preliminary dives before anchoring the buoys in position. The system proved a success, as by placing but a few white flags down at a time I was able to control the movements of the fleet and ensure the bank being fished in a methodical manner.

At the next fishery I propose to introduce further improvements in this flag system, among others the marking of the flags individually with distinctive numbers and signs.

Course and Results of the Fishery.—No boats were ready to begin fishing on the 14th March, but the following day twelve Colombo and Jaffna boats manned entirely with Arab divers had taken up positions by daybreak around the barque. As is the habit of Arabs, these men fished quietly and methodically and with great energy. By noon they were satisfied with their catch, an average of 22,811 oysters per boat, and hoisting sail made for the camp. Most of these Arab divers hailed originally from Bussorah and Bahrein, receiving their training as divers on the Persian Gulf pearling grounds.

Seventy to seventy-five seconds under water was their general average during the first day; they informed me that after two or three days' work, as they became accustomed to the depth, they would be able to stay down longer, a fact which I verified later, when I timed them frequently from 80 to 87 seconds. In one extreme case I timed one at 89 seconds from the time of his descent to that of reappearance.

The next day a number of Tamil and Moorish divers appeared, and on the fifth day of the fishery the number of boats actually at work had increased to 148, while for several days in the height of the fishery just over 200 boats (202) were employed.

The number of oysters brought up per dive on the South-West Cheval varied extremely. This must ever be the case in view of the great range of physique and skill characterizing divers from widely separated districts and of different races. The Arab has easy pre-eminence, bringing up on good ground 40 and even 50 per dive, as against the Dravidian Tamil's 20 to 35 oysters, with an average stay under water of 45 seconds. Rather superior to the Tamil divers, who by the way are all Roman Catholics, are the Moormen hailing chiefly from the great diving and fishing centre of Kilakarai on the Madura Coast.

At the 1903 fishery a large contingent of Malayalim divers attended from the Malabar Coast (Travancore and northwards); this year few were present, due to a triple conjunction of adverse circumstances—the abrupt announcement of the fishery after word had gone round the diving community that none was to be held, the prevalence of sickness at last year's camp, and lastly the fact that the depth of water on the Western Cheval, averaging 8 fathoms, is too great for them to work in with comfort, accustomed as they are to dive in 5 and 6 fathoms only. These men, who, in contradistinction to all other native divers, dive head foremost from a spring board, are notably the least capable and least intelligent divers who attend the Ceylon fishery, comparatively poor in physique and of little staying power, and very ready to leave the fishery as soon as they have made one or two hundred rupees.

Fishing on the South-West Cheval went on methodically and in a perfectly satisfactory manner for seventeen days, by which time the bank proper was practically cleared of oysters. On the eighteenth day of the fishery (2nd April) the fleet, instead of settling down to glean over the fished ground, flocked to a patch of mixed oysters on the north-east corner of the South-West section, and as a heavy swell was rolling in from the south-west I did not judge it advisable to attempt to move them away. This day's catch of oysters proved phenomenal, totalling close upon four millions (3,919,712), of which the Government share (2,609,445) sold for Rs. 39,058·79, being at an average rate of nearly Rs. 15 per thousand.

The oysters on this patch lay extremely thickly strewn in bunches upon a sandy bottom. I had not included them in my estimate of the south-west bed, considering it advisable to leave them for next year's fishery. However, the thinning out which this day's fishing entailed will have excellent results and conduce to more rapid growth during the intervening twelve months.

Judging it time to abandon the south-west region, I moved the ship to the bed upon the North-West Cheval on the 3rd April, laying out a series of red flag buoys along the boundary and white flag buoys as fishing centres as upon the South-West, and accordingly the fleet began work here upon the following day. A break in the excellent fishing weather unfortunately coincided, and from the 5th April more or less unfavourable weather prevailed steadily and practically without intermission, rendering fishing increasingly difficult and arduous. As a consequence the North-West bed was not exploited in the thorough manner characteristic of the fishery on the South-West section, and whereas 26 millions of five-year-old oysters were taken from the latter bed as against an estimate of 19½ millions, upon the north-west but 4¼ millions were fished as against the estimate of 9 millions. This less satisfactory result was, however, not due entirely to rough weather; many large patches were so thinly furnished with oysters that 5, 7, and 10 oysters per dive were the best possible—a condition of matters ill-suiting men who had been accustomed for over a fortnight preceding to averages of 25 and 35 per dive.

It became expedient, therefore, to open the last section—the Mid-West—to fishing on the 12th April, and on that date the boats lifted 1,244,070 oysters from this bed. From this date the wind increased greatly in force, and being accompanied by a heavier swell it became impossible to set definite limits to the ground to be fished upon. The number of the boats at work began to diminish rapidly, and by the 15th April the fishing, so far as the fleet as a whole was concerned, terminated.

From the 16th to the 18th April the weather was too boisterous to permit of any fishing. On the latter date some of the Arab divers being willing, it was arranged that they should be sent out aboard the steamers "Ready" and "Serendib" and carry on diving from these vessels. In all 44

responded to this emergency call, and I superintended their work on the 19th April, beginning fishing at 10.10 A.M. and ceasing at 3 P.M. During the whole time the weather conditions were the worst possible, a heavy sea running accompanied by a chill cutting wind. The men worked most pluckily and with the utmost good humour. The majority did not touch food all the time they were aboard—from 5.30 A.M. to nigh on 6 P.M. Parenthetically I may mention that, although they are classed roughly as Arabs, these men exhibit a wide range of racial type—from the hook-nosed, long-visaged, and light-coloured true Semite type through all grades to the bullet-headed, wooly-haired, flat-nosed African Negro of sable hue. But, whatever their tint and type, they agreed in their religious devotion to the Prophet's laws, and in the afternoon after the diving was over each took an early opportunity to turn his face Meccawards and recite the accustomed prayers.

This day's work by these 44 Arabs stirred up emulation in the breasts of their co-religionists, the Kilakarai Moormen, and enabled the fishery to be carried on in spite of the boisterous character of the weather for four days longer and with a gain to Government of Rs. 15,580.

By this time the great majority of the divers' boats had left Marichchikaddi, and on the 23rd April it was seen to be impossible to attempt to further prolong the fishery, which thus expired after a nominal length of thirty-three fishing days; on seven days, however, less than 200,000 oysters fell to Government share owing to the unfavourable nature of the weather on these days, so under these circumstances the grand total of just over 41 millions of oysters (41,039,085) was an extremely satisfactory result. Last year's fishery produced an almost identical number (41,169,637) spread over thirty-eight fishing days of continuously fine weather. Had similarly favourable conditions prevailed this year the divers would certainly have fished another 8 millions of oysters, and would probably have raised the grand total to 50,000,000.

Results of the Dredging Experiments.—By direction of Government the steamer "Ready" was engaged in experimental dredging during the greater part of this fishery under the charge of Mr. S. L. Edwards as Dredging Master.

The following table of the daily takes together with the number of hours actual occupied in dredging is instructive, namely :—

Date. 1904.	No. of Hours occupied.	No. of Oysters.
February 23	Non-continuous	5,400
February 25	Non-continuous	5,844
February 27	3	7,098
March 1	5½	12,648
March 3	5½	20,265
March 4	4	8,372
March 5	5	16,984
March 8	6	24,000
March 9	6½	28,116
March 14	7½	28,410
March 15	7	31,100
March 16	7½	31,504
March 17	3	20,000
March 19	3	10,400
March 20	7½	24,880
March 21	7	22,100
March 23	8	6,929
March 24	8	13,600
March 25	7	1,931
March 26	7½	1,600
March 29	7	1,522
March 30	7½	1,276
March 31	8½	5,548
April 3	½	615
April 11	7½	9,400
April 12	3	1,460
April 13	7	3,705
Grand Total	149½	344,707
Less oysters dredged on February 23 and 25		11,244
Result for 149 hours' dredging		333,463

From the above it will be seen that the average catch per hour was 2,231 oysters, and if we take seven hours as a fair dredging day we obtain 15,617 as the average number of oysters which this steamer dredged per day—a result anything but satisfactory.

Many circumstances militated against success, the chief being the inexperience of steam dredging shown by the Dredging Master, who, however capable he may be in the handling of small dredging smacks as used at Whitstable, had no knowledge of how dredging operations from a steamer should be conducted. Subsidiary causes are to be found in the makeshift character of many of the alterations to the steamer herself due to the hurried nature of the dredging preparations; sufficient time was lacking to fit her out as she should be fitted if to be detailed permanently for dredging. Other needful preparations had to be foregone in their entirety. However, while I believe that the highest dredging returns of this steamer, say 30,000 oysters per diem, might easily be doubled were she fitted out as I should recommend, and if she were handled by a capable man intimately acquainted with steam dredging and accustomed to working with rigid exactitude, yet I have some doubt whether, if under the best of circumstances and even if worked under my personal supervision, she could lift more than 80,000 oysters per day. Possibly this number might be exceeded occasionally, but I fear any higher amount would not be constituted a working average.

At 70,000 to 80,000 oysters per day I should consider the steamer to be giving very satisfactory results, but I wish to emphasize the fact that such results can be hoped only from a few of the banks,

i.e., the North and South Moderagams, part of the Cheval and some of the smaller and less important paars.

I cannot see that dredging can prove remunerative on a commercial scale upon the Muttuvaratu, the Karaitivu, and the Dutch Moderagam.

Where, however, I believe the advantages of dredging to be greatest are in regard to dredging for the purpose of spat transplantation, a subject which I treat of elsewhere in some detail.

Dredging is also of invaluable assistance in preliminary or prospecting inspections, when it is necessary to ascertain the presence or the absence of oyster patches on ground too extensive for detailed examination by means of divers.

Dredging Recommendations.—In order to make the "Ready" more suitable for dredging I would recommend the following alterations and additions to her hull and equipment, namely :—

(1) *Structural Alterations*—

(*a*) The fitting of cage-guards over the propellers in order to prevent the fouling of the dredge warps therewith. These guards should be made detachable so as to be capable of easy and expeditious removal and replacement.

(*b*) The fitting of rolling chocks to reduce lateral motion as far as possible when the steamer is dredging broadside to the current or swell. At the best of times this steamer, because of her flatness of bottom, rolls most uncomfortably. Satisfactory dredging is impossible under such circumstances, the dredge ropes alternately slacking away and tautening with a jerk as the vessel recovers, thereby causing the dredge to alternately stop dead and then be jerked forward off the ground, progressing not with steady regularity, but by a series of spasmodic leaps and bounds.

(*c*) If the steamer is to be used permanently for dredging, the hatch combings should be removed and the hatch partly decked over to give room to work six additional dredges amidships.

(2) *Additions to Equipment.*—The additions needful are chiefly such as would increase the dredging capacity, *i.e.*, to enable a larger number of dredges to be worked at one and the same time.

I recommend such a rearrangement of equipment as will permit the installation of eight additional dredges. I also recommend an entire revolution in the method of operating the dredges, the one adopted by the Dredge Master being in my opinion ill-suited for the special conditions encountered upon our pearl banks.

The form of dredge used might easily be improved upon. Experiments should be made with dredges of different patterns to ascertain practically the one best suited in form, in size, and in weight to the special local requirements of the Ceylon pearl banks. Under specially favourable conditions a modification of the trawl might be utilized with great advantage.

The Weather during the Fishery.—Excellent weather prevailed from the day I left Colombo to the date of beginning the inspection (22nd February); light land and sea breezes alternating morning and afternoon. From 22nd February to 1st March inclusive strong north-east winds blew continuously, raising a heavy sea and rendering the work of inspection difficult. On 2nd March typical fishery weather set in, characterized by a breeze from the south-east in the early morning veering round gradually by the southward to the west by noon, and then on to the north-west in the afternoon—an arrangement admirably suited to the sailing requirements of the diving fleet, which was thus enabled to run out to the fishing grounds with a fair wind in the early morning and to return to the camp in the afternoon with an equally favourable following wind. From about 11 A.M. to noon a dead calm usually prevailed and marked the time of greatest activity in diving work. Early in the evening during this period the wind worked round to the north-east, and later to the east, and finally to the south-east, where it remained for some hours after daybreak.

Unfortunately the spell of fishing weather was of short duration this year ending as it did on the 30th March.

The following morning broke fine, with a placid sea, perfect conditions for fishing. By 3 P.M. heavy monsoonish clouds banked up to the south-west, and the wind, instead of changing to the usual north-west sea breeze, increased in force from the south-west, raising a rough and ugly sea.

The weather remained variable during the first four days of April, but with a heavy swell from the south-west running continuously accompanied by a strong northerly current, the wind ranging from south to south-west.

The south-west swell made diving distinctly difficult on the twentieth day of the fishery (5th April) and continued with monsoonish vigour thereafter until the close of the fishery, which indeed it directly brought about.

After the 4th April the weather was so continuously boisterous, the sea running so high, that from that date onwards only three days were sufficiently calm to permit of dredging by the method adopted by the Dredging Master. Under these circumstances the divers deserve the utmost credit for their perseverance in the face of danger and discomfort. Had they not been keen to work the fishery would have come to a premature end on the 7th April by reason of bad weather. As it was it was continued off and on for a further thirteen days beyond the commencement of unfavourable conditions of sea and wind.

Two points of interest were noted in connection with the beginning of the bad weather: the one that the phase of full moon on the evening of the 31st March synchronized with the change from fine to bad weather; the second that the next day, 1st April, when, the unfavourable conditions intensified, rain squalls—the only ones experienced during my stay on the pearl banks—occurred from 8 to 9 P.M.

Cultivation of the Banks.—Transplantation of spat with the subsidiary operations which it entails is admittedly the most important cultural means at our disposal for increasing the harvest of the pearl banks, and to make good any deficiency in spat fall upon the favourable paars.

As noted elsewhere, no fall of oyster spat has occurred upon either the Cheval or the Moderagam Paars during the last two years, and it therefore behoves us to endeavour to make good the shortcomings of Nature by employing artificial means to stock these paars with a fresh supply of oysters, unless we be content to revert to frequent series of lean years in our coming fishery records.

With this transplantation scheme in view I took an early opportunity to prospect upon the Periya Paar for young oysters, experience and the historical records of the banks having shown this to be the ground where occur the richest and most frequent falls of spat. My hopes were amply fulfilled in the discovery on the 14th March of a huge bed extending north and south fully five miles and varying in breadth from one mile to one mile and a half. Everywhere the bed was densely covered with pearl oysters of less than three months old. The conditions for dredging them up could not have been better, such vast numbers lying on sand in densely crowded clusters and bunches that those adhering to rock might be ignored as more difficult to remove. This enormous abundance of spat afforded the requisite material for transplantation, and as the history of this bank shows conclusively that oysters do not mature here oftener than once in a century, and but few even then, there can be no hesitation to exploit this supply to the utmost of power—to remove the largest possible quantity that by any means we can compass, to the end that ground more suitable for the maturing of oysters may be enriched.

The East and North-east Cheval having been fished clear of oysters last year, and being ground proper for maturing purposes, I proposed to Government that sanction should be accorded me to utilize the dredger "Ready" for one month from the 1st April to transplant spat from the Periya Paar to the Eastern Cheval.

This proposal was duly sanctioned, as was also one to obtain a large quantity—200 to 300 tons—of rubble broken small (roughly $3\frac{1}{2} \times 3\frac{1}{2} \times 2\frac{1}{2}$ inches in size) for the purpose of laying down on the more sandy regions of the transplantation area to improve the surface by providing an adequate amount of solid material for the spat to make attachment to. This process, known as "cultching," is extensively practised for the improvement of oyster beds in Europe and America; its value is amply established and quite unquestioned for good.

Pending the date upon which the dredger was to be placed at my disposal I made arrangements by the courtesy of the Public Works Department to obtain a trial shipment of 100 tons of calcareous sandstone from Kalpitiya to be laid down on the selected ground as soon as transplantation was in swing. Among other preparations I inspected a likely area on the East Cheval and laid down on the selected ground a set of five mark buoys for the guidance of the Master of the "Ready" when engaged upon the distribution of the dredged spat.

Unfortunately for my carefully thought out plans the dredger by reason of rough weather was able to put in but two days and a half at this spat dredging prior to the 9th April, on which date I received instructions to place the "Ready" at Mr. Dixon's disposal for the purpose of dredging mature oysters, and when the vessel again reverted to me continuous bad weather had set in rendering it impossible to work upon the exposed Periya Paar. As a consequence I had to cancel the cultching arrangements, and transplanting operations are in consequence postponed for an entire year.

With regard to the future of transplantation I can but endorse Professor Herdman's reiterated statement that *in this alone lies the salvation of the pearl banks.* This being so, if Government approves of such recommendation, it will be absolutely necessary in order to ensure success to give me both permission to arrange for and carry out an extensive programme of transplantation and cultching and to provide me with adequate means for the purpose—that is to say, I should have a dredging steamer at my disposal from the very date of finding young oysters fit for transplanting, and that *this steamer should be devoted solely to this work for the whole of the fine weather available and suitable for dredging.* Only by transplantation on the greatest possible scale can success be assured. We must remember the largeness of the object in view and the huge profit to be made—nothing less than the formation of a bed of oysters of sufficient extent to allow for extensive wastage due to a dozen different causes, and after such wastage to give a fishery of mature oysters calculable in millions.

It is but an obvious truism to say that great results cannot be obtained by the employment of trivial means. To form a bed of oysters that will yield say, ten millions at a fishery four to five years hence necessitates effort on a commensurate scale.

Casualties.—The present fishery was marked by comparative immunity from serious accidents during the time the divers were engaged at their calling, and it is gratifying to be enabled to state that but a single death occurred, the case of a thick-necked apoplectic-looking Moorman brought up dead from the bottom.

Another day a young diver was brought alongside the inspection barque suffering from a broken head; he had come into violent collision on his ascent with a descending sink-stone. I applied a few simple remedies, and I subsequently learned that he recovered within a few days.

Excepting this case, the usual run of rough and ready treatment that was expected from me by the divers and boatmen consisted of easily diagnosed cases of chills and fever and neglected abrasions and sores; one week towards the end of the inspection I had a regular queue of such patients to attend to each morning. Quinine, castor oil, and simple antiseptics proved all-sufficient.

The divers' boats did not fare so well as the men; four boats broke loose at their anchorage during the final week of the fishery and were stove in upon the beach, becoming total wrecks. Another capsized on the run home and could not be salved, although the occupants were all picked up by a companion boat. Several other boats received minor damage to sails, masts, and rudders during the latter part of the fishery. In this connection I desire to express my admiration of the splendid manner in which Mr. O. Jensen, Master of the "Ready," handled his steamer in picking up and taking in tow these disabled boats. His steamer is not an easy one to handle in a heavy sea, and naturally it was just during such boisterous weather that the mishaps occurred. On one occasion in the worst weather in which the boats fished Captain Jensen had to pick up one which had lost a rudder, one with a broken mast, and a third where the sail was torn to ribbons.

No sharks were seen in the fishing grounds; indeed I may say that during all the months I have spent upon the pearl banks during the last two years and a half I have never had a glimpse of a shark dangerous to man. Several times the boatmen have caught basking sharks of considerable size, but all were of a species that lives almost entirely upon small crustaceans.

Types of Boats.—The picturesque appearence of the pearling fleet when under weigh has been described times without number—picturesqueness that depends partly upon the great number of boats engaged, partly upon the hugeness of the sails they carry, and, when seen near at hand, largely upon the diversity of the types of boats and sails.

At the fishery of this year the fleet was separable into five component divisions, the boats in each characterized by sharp and distinct differences in hull, rigging, and sails.

These five types belonged respectively to five different ports or groups of ports, namely :—

(*a*) Large-sized sailing lighters from Tuticorin.
(*b*) Large dhoneys from Jaffna, Kalpitiya, and other ports in the North of Ceylon.
(*c*) Narrow canoe-like boats with outrigger board from Kilakarai and the neighbouring villages on the Madura Coast.
(*d*) Long three-masted canoes from Adirampatnam and Mutupet on the Tanjore Coast.
(*e*) Square-sterned Paumben boats of lugger rig.

Besides these there were a few boats of miscellaneous types hailing from Colombo.

The Tuticorin lighter, the Jaffna dhoney, and Kilakarai canoe are all single masted, bearing huge lug sails. The first-named is by far the largest type of boat taking part in the fishery, varying in tonnage from 20 to 40 tons capacity. Clumsy looking, as they are, they sail splendidly in a favourable breeze, their solid build permitting the employment of a great sail area. The stern is sharp ; practically both extremities are alike. All these Tuticorin boats are copper bottomed.

In some cases as many as thirty divers went out in one off these boats, and as each diver requires an attendant *munduck*, there were as many as 64 or 66 men aboard, the extra number being accounted for by the crew and the Government boat guard.

The Kilakarai canoes also run sharp at either end, the bow being usually curved upwards and inwards to form a small ornamental prow with a crudely painted symbol of an eye on either bow. They sail extremely well, as, although they are extremely narrow, satisfactory stability is obtained by the employment of an outrigger board placed amidships, to which the mast is stayed. In a breeze this board is run out to windward and live ballast distributed along its length. On several occasions towards the end of the fishery I have seen as many as six men standing and squatting on the portion projecting beyond the side—the boat tearing through the water at a grand pace. These craft could in most cases easily outpace the other types in the race for the camp.

The boats hailing from Kilakarai itself are painted bright colours—red, or green, or yellow ; those of similar type hailing from the neighbouring villages of Vaipar, Vembar, &c., often attempt in addition a rude decoration of the sides in geometrical pattern.

The great canoes from Adirampatnam and Mutupet are the strangest craft of the fleet—long and narrow, with curved prow and usually painted a pale blue colour. They carry three masts—a tall main mast with a diminutive mast fore and aft bearing correspondingly diminutive sails. They are not furnished with outrigger boards, although otherwise they appear to have been evolved from a common origin with the Kilakarai boats.

The Jaffna dhoney is too familiar to require description. Comparatively broad for their length, they are roomy craft and sail well. Their usual colour is black.

The three last described types all affect a very heavy and peculiar-shaped rudder—so shaped and so substantial that a man can easily squat upon the upper edge.

The fifth type, the Paumben boat, approximates in hull and rig to a somewhat clumsy European lugger ; indeed we may fittingly call it a lugger, as it is fitted with the three distinctive lugger sails—a gib, a large lug on the mainmast, and a small one on the mizzen. The stern is square, with European style of rudder.

Services of the Inspection Staff.—I wish to bring to the notice of Government the excellence of the work done by the four coxswains of the inspection boats. Upon these men fall a great part of the heat and toil of the day. Careful scrutiny of their work enables me to place reliance upon their judgment and upon their familiarity with local conditions upon the banks. They have ever been most willing to do everything in their power to assist me, and they take both an intelligent and painstaking interest in their duties. They have indeed been my righthand men throughout the inspection and fishery.

The tindal and crew of the "Mohideen Bux" also deserve praise for the willingness they have invariably displayed in helping on the work—often in ways in which I had no claim upon their obedience. In particular I wish to remark upon the good work they did in the laying out and taking up of buoys. In this respect their service was specially welcome, as this duty occurred just at the time when the inspection boatmen returned to the ship tired out after a morning's long row—six hours continuous labour at the oars.

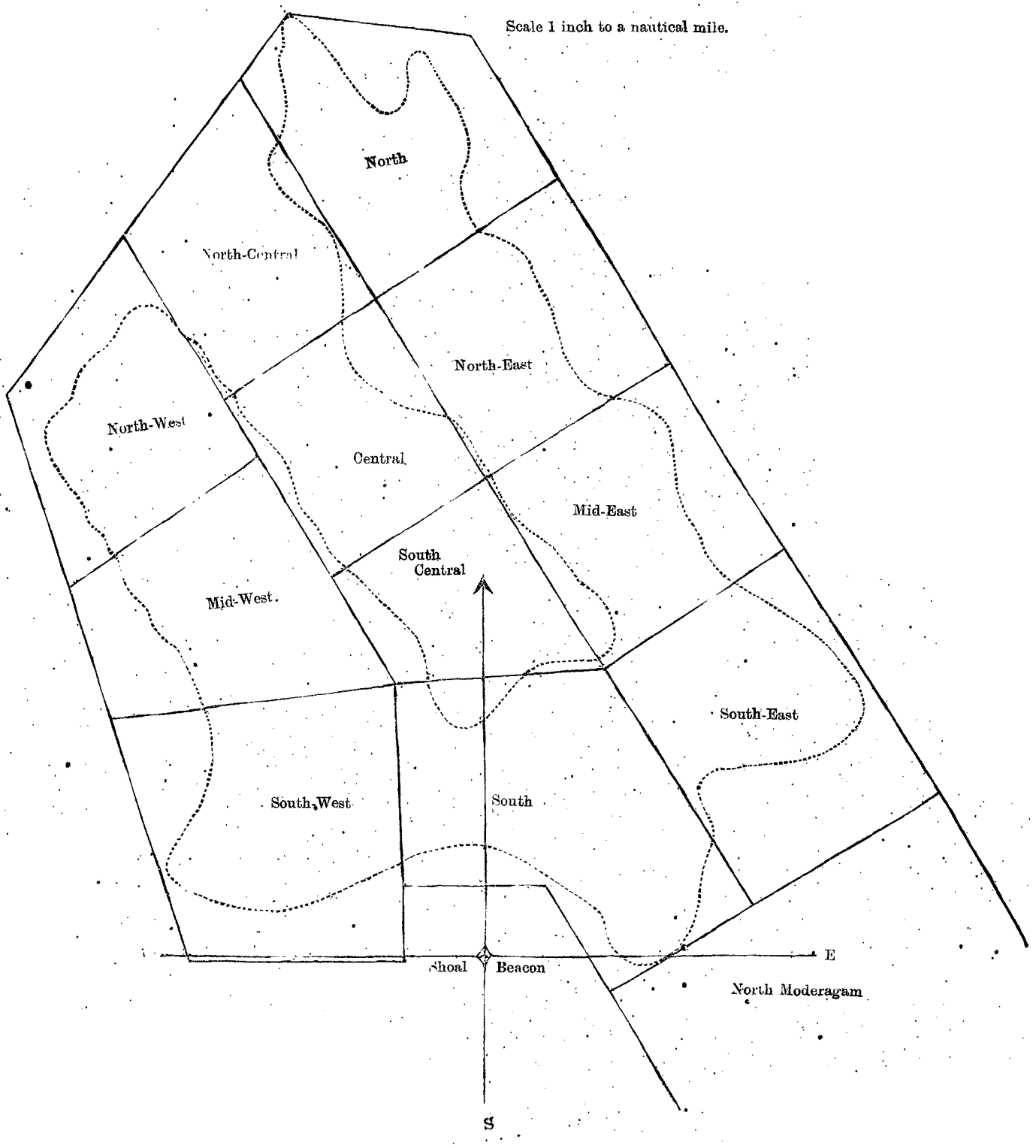
In conclusion, I have to record my satisfaction with the work performed by my clerk Mr. F. Assauw. Under former conditions, when the Master Attendant held the post of Inspectorship of Pearl Banks, his Assistant and staff in Colombo performed the necessary clerical duties. As I am without a shore staff and had greater clerical requirements than preceding Inspectors, the Government approved of my application to be furnished with a clerk to accompany me to the pearl banks. The result proved the necessity for the step, there being enough work to keep his services constantly employed. I would recommend for the future that a clerk should be regularly detailed for such duty at each recurring inspection.

JAMES HORNELL.
Inspector of Pearl Banks.

Pearl Banks, May 7, 1904.

Annexure I.

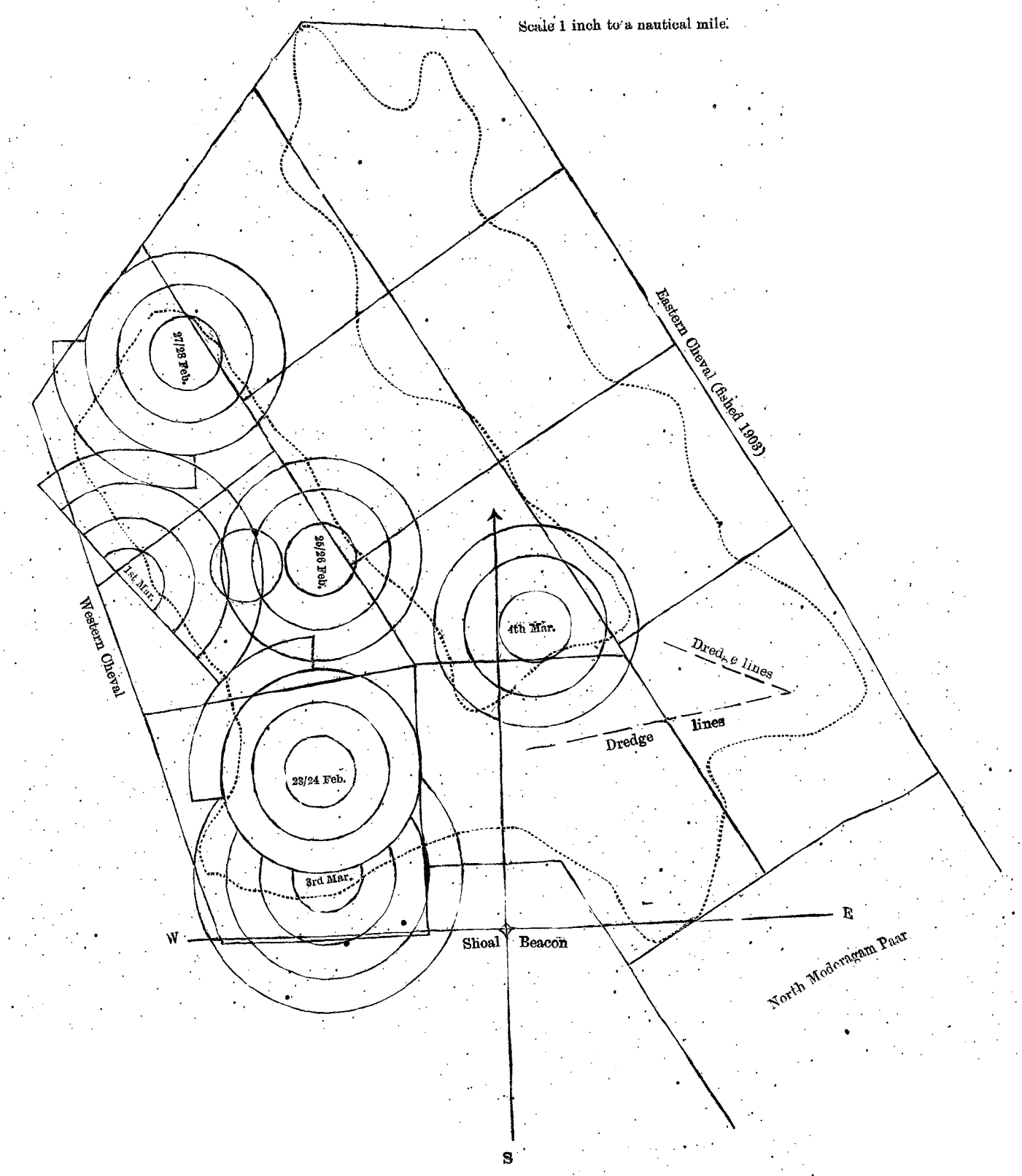
Outline Plan of the Cheval Paar Area showing the Boundaries of the culture Blocks into which this Pearl Bank is now divided, together with a Key to the Nomenclature of these Sections adopted in the accompanying Report.



NOTE—The South-West, Mid-West, and North-West constitute the Western Cheval. The South, South-Central, Central, and North-Central constitute the Median Cheval. The South-East, Mid-East, North-East, and North together form the Eastern Cheval. The dotted outline represents the limits of the bank as formerly charted.

Annexure II.

Sketch Plan of the Cheval Paar Area showing the method and extent of the inspection carried out upon the Western Division during February and March, 1904.

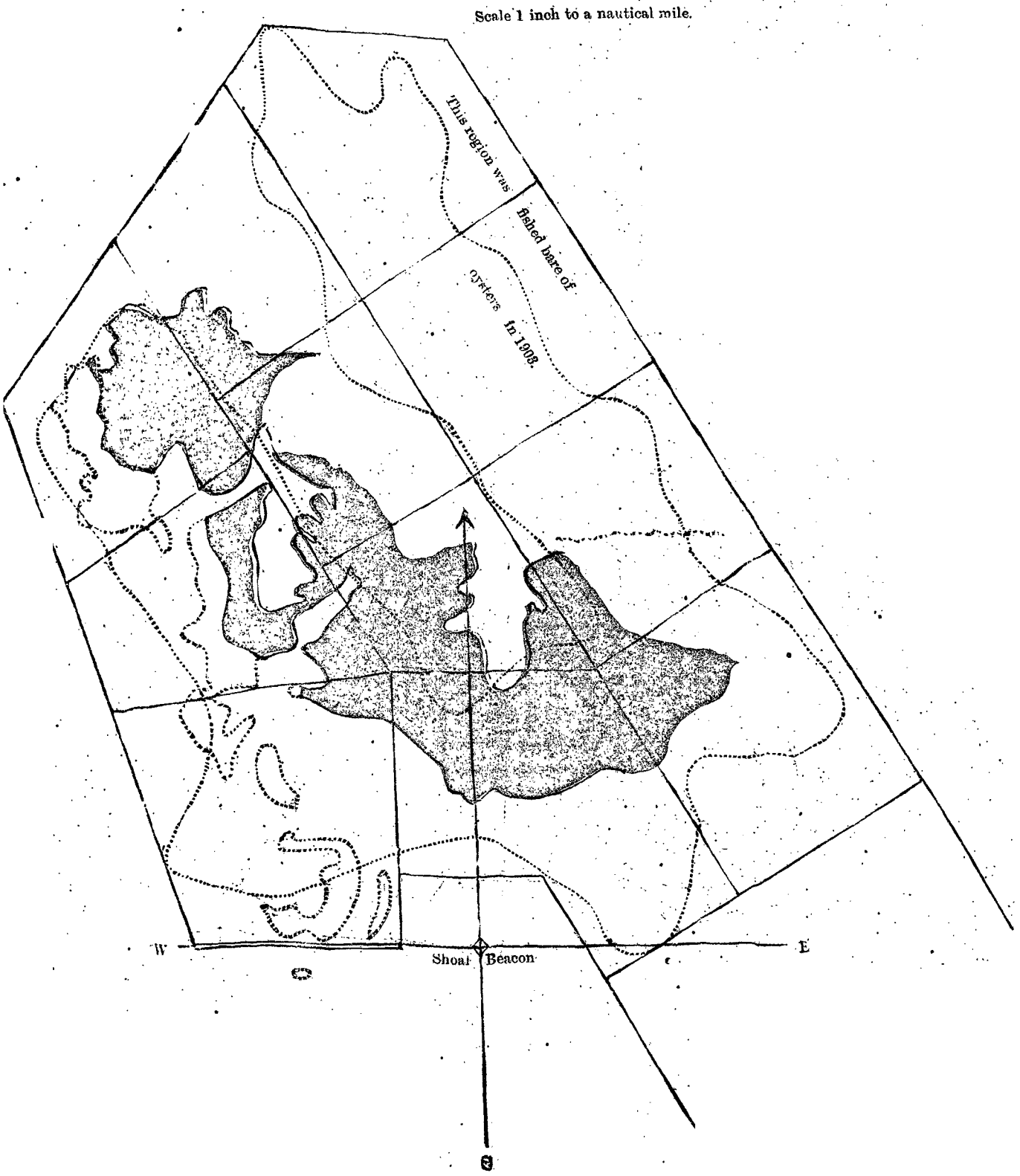


NOTE.—The concentric lines indicate the ground worked over by the inspection boats; each line in practice is however quadrupled. The dotted outline represents the limits of the bank as formerly charted.

Annexure III.

Sketch Plan of Cheval Paar Area showing the distribution of old and of young Pearl Oysters in February, 1904.

Scale 1 inch to a nautical mile.

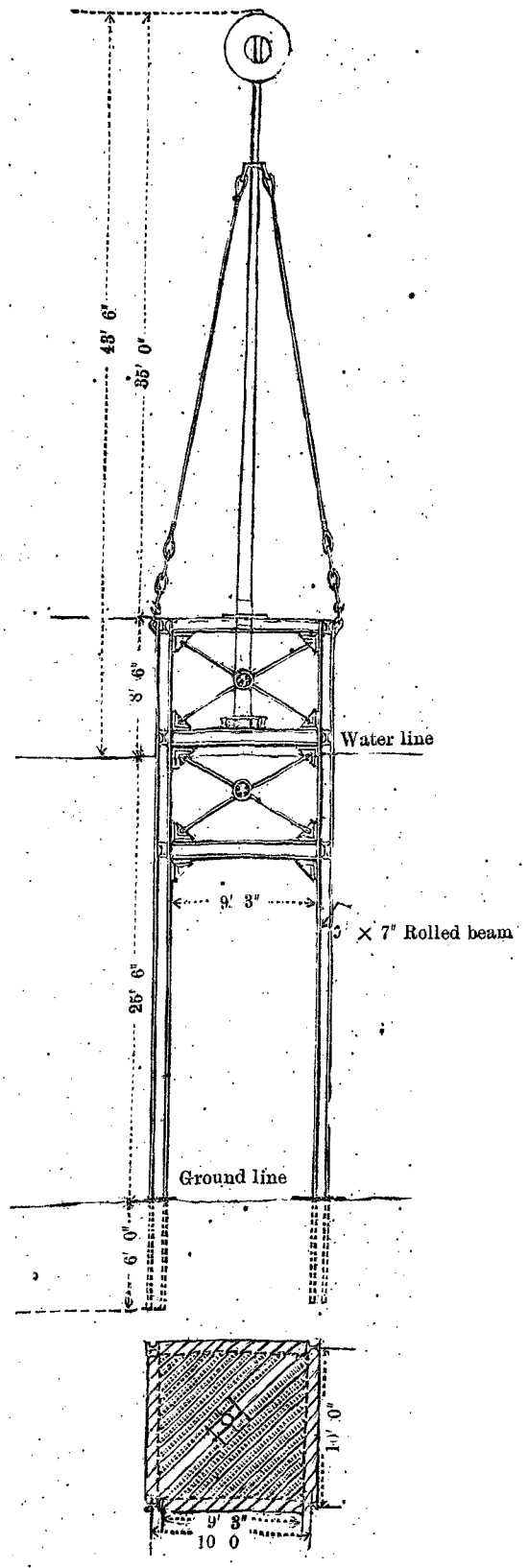


Explanation of Colouring.—The areas tinted red show the extent of bottom occupied by 5-year old oysters, while the blue colouring indicates the extent over which 2½-year old oysters were distributed.

Annexure IV.

Karaitiva Shoal Beacon.

Scale $\frac{1}{4}$ inch = 1 foot.



Annexure V.

Statement of the Valuation and Produce of 12,000 Oysters taken from the South-West Cheval Paar in February, 1904.

Description.	Size in Basket.	Number.	Quantity in Chevoe.	Kalanchu.	Manchadi.	Total. Kalanchu.	Total. Manchadi.	Value.	Total Value.	Per Chevoe.	Per Kalanchu.
								Rs. c.	Rs. c.		
Ani	20	1	$\frac{2}{320}$	—	$\frac{5}{16}$			12 58		50 star pagodas	—
Anatari	—	1	$\frac{60}{320}$	—	$\frac{1}{2}$			19 68		30 star pagodas	—
Kalippu	—	2	—	—	1			5 25		—	30 star pagodas
Kuruwal	—	2	—	—	$\frac{3}{4}$			1 31		—	10 star pagodas
Pisal	—	7	—	—	$3\frac{1}{2}$			1 83		—	3 star pagodas
Kodai	—	3	—	—	$1\frac{1}{4}$			0 21		—	1 star pagoda
Ani	30	5	$\frac{106}{320}$	—	$1\frac{1}{2}$			42 87½		40 star pagodas	—
Kalippu	—	7	—	—	$2\frac{1}{16}$			7 44		—	20 star pagodas
Kuruwal	—	5	—	—	$1\frac{3}{4}$			3 6		—	10 star pagodas
Kodai	—	4	—	—	1			0 17½		—	1 star pagoda
Anatari	50	3	$\frac{25}{320}$	—	$\frac{9}{16}$			8 22½		30 star pagodas	—
Kalippu	—	7	—	—	$1\frac{1}{2}$			5 25		—	20 star pagodas
Kuruwal	—	10	—	—	$2\frac{1}{2}$			5 25		—	12 star pagodas
Pisal	—	3	—	—	$\frac{3}{4}$			0 39		—	3 star pagodas
Kodai	—	4	—	—	$\frac{3}{4}$			0 13		—	1 star pagoda
Ani	80	9	$\frac{40}{320}$	—	$1\frac{1}{4}$			21 87½		50 star pagodas	—
Anatari	—	6	$\frac{40}{320}$	—	1			13 12½		30 star pagodas	—
Kalippu	—	17	—	—	$2\frac{1}{2}$			8 75		—	20 star pagodas
Kuruwal	—	21	—	—	$4\frac{1}{4}$			8 92½		—	12 star pagodas
Pisal	—	6	—	—	1			0 52½		—	3 star pagodas
Kodai	—	3	—	—	$\frac{1}{2}$	3	$13\frac{4}{16}$	0 8½	166 94	—	1 star pagoda
Vadivu	100	—	—	—	18						
	200				19	2	15	—	192 50	—	20 star pagodas
	400				18						
Thul	600			1	5						
	800	—	—	—	17	2	12	—	63 70	—	7 star pagodas
	1,000				10						
Masi-thul	—	—	—	—	16		16	—	7 0	—	2½ star pagodas
Shell Pearls	—	—	—	—	—			—	2 0	—	—
						7	$13\frac{4}{16}$		432 14		

The total valuation is equal to an average of Rs. 36·01 per 1,000 oysters.

Marichchikaddi, March 9, 1904.

JAMES HORNELL, Inspector of Pearl Banks.
V. VRASPILLAI, Musali Adigar.
செ. பி. சதக்குவெல்லை, Valuer.
ச. மு. செ செய்யத் முகம்மது நெயினா, Valuer.
ச. மா. சேகுமுகம்மது, Valuer.

Annexure VI.

Statement of the Valuation and Produce of 7,200 Oysters taken from the North-West Cheval Paar in February, 1904.

Description.	Size in Basket.	Number.	Quantity in Chevoe.	Kalanchu.	Manchadi.	Total. Kalanchu.	Total. Manchadi.	Value.	Per Chevoe.	Per Kalanchu.
								Rs. c.		
Anatari	20	2	120/320	—	1			39 37½	30 star pagodas	—
Kalippu	—	1	—	—	5/16			1 9	—	20 star pagodas
Kodai	—	1	—	—	1/8			0 8½	—	1 star pagoda
Anatari	30	1	150/320	—	1/4			4 92	30 star pagodas	—
Kalippu	—	2	—	—	1/8			2 62½	—	30 star pagodas
Pamparakuruwal	—	1	—	—	5/16			1 9	—	20 star pagodas
Surippu	—	1	—	—	5/16			0 33	—	6 star pagodas
Ani	50	2	110/320	—	5/16			4 81	40 star pagodas	—
Anatari	—	2	110/320	—	5/16			3 60	30 star pagodas	—
Kalippu	—	2	—	—	15/16			1 9	—	20 star pagodas
Vankodai	—	1	—	—	1/16			0 7½	—	3 star pagodas
Ani	80	5	460/320	—	1			26 25	50 star pagodas	—
Anatari	—	4	320/320	—	3/4			10 83	30 star pagodas	—
Kalippu	—	10	—	—	1¾			6 12	—	20 star pagodas
Kuruwal	—	5	—	—	15/16			1 31	—	10 star pagodas
Pisal	—	3	—	—	9/16	3	96	0 52½	—	6 star pagodas
Vadivu	100	—	—	—	8	—	26	113 75	—	25 star pagodas
	200				9					
	400				9					
Thul	600	—	—	—	8	—	18	22 5	—	7 star pagodas
	800				7					
	1,000				3					
Masi-thul	—	—	—	—	5	—	5	2 18½	—	2½ star pagodas
Shell Pearls	—	—	—	—	—	—	—	0 89	—	—
						2	18	243 0		

The total valuation is equal to an average of Rs. 33·75 per 1,000 oysters.

Marichchikaddi, March 9, 1904.

JAMES HORNELL, Inspector of Pearl Banks.
V. VRASPILLAI, Musali Adigar.
செ. யே. சதக்குலெவ்வை, Valuer.
ச. மு. செ. செய்யது முகம்மதுலெயினு, Valuer.
ச. மர். சேகுமுகம்மது, Valuer.

Annexure VII.

Statement of the Valuation and Produce of 6,000 Oysters taken from the Mid-West Cheval Paar in March, 1904.

Description.	Size in Basket.	Number.	Quantity in Chevoe.	Kalanchu.	Manchadi.	Total: Kalanchu.	Total: Manchadi.	Value.	Per Chevoe.	Per Kalanchu.
								Rs. c.		
Kalippu	20	2	—	—	$\frac{5}{8}$			3 31	—	30 star pagodas
Vankodai	—	1	—	—	$\frac{1}{4}$			0 $8\frac{1}{2}$	—	2 pagodas
Ani	30	1	$\frac{23}{320}$	—	$\frac{5}{16}$			12 $68\frac{1}{2}$	50 star pagodas	—
Kalippu	—	1	—	—	$\frac{1}{4}$			1 31	—	30 pagodas
Anatari	50	2	$\frac{16}{320}$	—	$\frac{6}{16}$			5 25	30 pagodas.	—
Kalippu	—	2	—	—	$\frac{6}{16}$			1 31	—	20 pagodas
Kuruwal	—	2	—	—	$\frac{6}{16}$			0 $78\frac{1}{2}$	—	12 pagodas
Ani	80	1	$\frac{3}{320}$	—	$\frac{1}{8}$			1 65	50 pagodas	—
Anatari	—	3	$\frac{10}{320}$	—	$\frac{6}{16}$			3 29	30 pagodas	—
Kalippu	—	7	—	—	1			5 25	—	30 pagodas
Kuruwal	—	8	—	—	$1\frac{1}{8}$			1 75	—	9 pagodas
Pisalkuruwal	—	1	—	—	$\frac{1}{4}$			0 21	—	5 pagodas
Vankodai	—	1	—	—	$\frac{3}{16}$		$5\frac{10}{16}$	0 6	—	2 pagodas
Vadivu	100 200 400	—	—	—	$4\frac{1}{2}$ $4\frac{1}{2}$ 5	—	14	61 25	—	25 pagodas
Thul	600 800 1,000	—	—	—	$7\frac{1}{2}$ 6 4	—	$17\frac{1}{2}$	21 44	—	7 pagodas
Masu-thul	—	—	—	—	4	—	4	1 75	—	$2\frac{1}{2}$ pagodas
Shell Pearls	—	—	—	—	—	—		0 $11\frac{1}{2}$	—	—
						2	$1\frac{2}{16}$	121 50		

The total valuation is equal to an average of Rs. 20·25 per 1,000 oysters.

Marichchikaddi, March 9, 1904.

JAMES HORNELL, Inspector of Pearl Banks.
V. VRASAPILLAI, Musali Adigar.
செ. யி. சதக்குலெவ்வை, Valuer.
சு. மு செ. செய்யது முகமதுநெய்னு, Valuer.
சு. மா. சேகுமுகம்மது, Valuer.

Annexure VIII.

Tabulation and Comparison of the Value and Weight of the Chief Samples of Pearl Oysters tested since 1854.

Date of lifting Sample.	Bank taken from.	Number of Oysters lifted.	Total Weight of Pearls produced, including Shell Pearls.		Average Weight of Pearls per 1,000 Oysters.		Total Value of Sample.	Value per 1,000 Oysters.	Age of Oysters.	Remarks.
			Kalanchu.	Manchadi.	Kalanchu.	Manchadi.				
							Rs. c.	Rs. c.	Years.	
November 1854	Cheval ...	4,000	1	—	—	5	70 72	17 68	4	Age accurately known. Increase in weight of pearls is equal to 60 per cent. for these four months.
March 1855	do. ...	4,500	1	10	—	6	60 87	13 75	$4\frac{1}{3}$	
November 1856	do. ...	10,000	6	1	—	13	100 60	11 06	—	
February 1857	do. ...	10,000	4	16	—	9	140 0	14 0	4	These Cheval oysters were all of the same brood. Ages given are approximate. The increase in weight of pearls per 1,000 oysters was 166 per cent. between fourth and fifth year and 89 per cent. between fifth and sixth year.
November 1857	do. ...	12,000	9	—	—	15	195 72	16 31	$4\frac{3}{4}$	
February 1858	do. ...	12,000	14	13	1	4	260 40	21 70	5	
November 1858	Moderagam ...	12,000	12	17	1	$1\frac{1}{2}$	182 16	15 18	—	
Do. 1858	Cheval ...	10,000	17	8	1	15	317 0	31 70	$5\frac{3}{4}$	
March 1859	do. ...	10,000	22	15	2	$5\frac{1}{2}$	446 60	44 66	6	
Do. 1859	Moderagam ...	12,000	19	2	1	12	295 68	24 64	5	Of the same brood. Increase in weight of pearls between fifth and sixth year of age 100 per cent.
November 1859	do. ...	1,220	weight not given				42 95	35 21	$5\frac{3}{4}$	
March 1860	do. ...	6,500	20	$19\frac{1}{2}$	3	4	469 75	72 27	6	
November 1862	Cheval ...	12,000	29	13	2	9	540 0	45 0	—	
March 1863	do. ...	12,000	31	12	2	13	516 0	43 0	5	Age approximate.
November 1863	do. ...	12,000	31	1	2	12	584 40	48 70	6	
Do. 1873	do. ...	10,000	3	15	—	$7\frac{1}{2}$	333 35	33 33	—	
February 1874	do. ...	10,000	5	8	—	11	365 0	36 50	4	Age accurately known. The same brood. Increase in sixteen months 177 per cent. or 132·75 per cent. in one year.
November 1876	do. ...	10,000	4	$6\frac{14}{20}$	—	$8\frac{3}{4}$	266 99	26 70	$3\frac{2}{3}$	
March 1878	do. ...	7,781	10	$3\frac{1}{4}$	1	5	318 $68\frac{1}{2}$	37 86	5	
Do. 1878	Koddeipakku ...	1,100	—	$5\frac{3}{5}$	—	5	5 52	5 2	—	Same brood. Shows increase in weight of pearls in one year of 166·25 per cent.
November 1878	do. ...	13,125	10	$7\frac{1}{5}$	—	15·69	225 $85\frac{3}{4}$	17 21	—	
February 1879	do. ...	16,000	10	$13\frac{1}{16}$	—	13·33	297 56	18 59	—	
November 1879	North-West Cheval ...	12,000	3	$1\frac{7}{16}$	—	5·08	77 21	6 43	$4\frac{3}{4}$	An increase in weight of pearls in one year of 249·05 per cent.
Do. 1880	do. ...	16,200	14	$8\frac{6}{16}$	—	17·79	346 27	21 $37\frac{1}{2}$	$5\frac{3}{4}$	
February 1881	do. ...	15,200	13	—	—	17	331 48	21 80	—	
April 1884	Karukupanai ...	3,000	—	$16\frac{1}{8}$	—	5·50	35 25	11 75	—	
March 1887	North-East Cheval ...	10,253	3	$19\frac{1}{8}$	—	7·68	114 $17\frac{1}{2}$	11 14	$3\frac{1}{4}$ to $3\frac{1}{2}$	
November 1887	do. ...	12,053	8	$16\frac{2}{16}$	—	14·66	218 0	18 9	$4\frac{1}{4}$	
March 1887	North-West Cheval ...	10,508	2	$14\frac{11}{20}$	—	5·15	72 60	6 91	$3\frac{1}{4}$ to $3\frac{1}{2}$	
November 1887	South-West Cheval ...	12,100	8	$13\frac{7}{16}$	—	14·33	212 0	17 50	$4\frac{1}{4}$	
Do. 1887	South-East Cheval ...	12,060	7	$13\frac{6}{16}$	—	12·72	172 0	14 27	$4\frac{1}{4}$	
Do. 1887	North-West Cheval ...	12,180	8	$19\frac{15}{16}$	—	14·77	225 0	18 45	$4\frac{1}{4}$	
Do. 1887	Mid-East Cheval ...	12,016	3	17	—	6·41	78 25	6 51	$4\frac{1}{4}$	
March 1887	Moderagam ...	10,550	3	$14\frac{20}{20}$	—	7·05	104 $15\frac{7}{8}$	9 87	$3\frac{1}{4}$ to $3\frac{1}{2}$	
November 1888	Muttuvaratu ...	12,000	3	$10\frac{8}{16}$	—	5·84	122 0	10 16	—	All from the same brood.
February 1889	do. ...	12,650	4	$18\frac{3}{8}$	—	7·81	142 0	11 $18\frac{1}{2}$	—	
November 1889	do. ...	15,000	10	$2\frac{12}{16}$	—	13·51	300 0	20 0	—	
February 1890	do. ...	16,000	10	$19\frac{17}{16}$	—	13·74	271 10	16 $94\frac{3}{8}$	—	
November 1890	do. ...	15,200	17	8	—	22·89	550 0	36 11	—	

Tabulation and Comparison of the Value and Weight of the Chief Samples of Pearl Oysters tested since 1854—*contd.*

Date of lifting Sample		Bank taken from.	Number of Oysters lifted.	Total Weight of Pearls produced, including Shell Pearls.		Average Weight of Pearls per 1,000 Oysters.		Total Value of Sample.	Value per 1,000 Oysters.	Age of Oysters.	Remarks.
				Kalan-chu.	Man-chadi.	Kalan-chu	Man-chadi.	Rs. c.	Rs. c.	Years.	
November	1889	Karaitivu ...	8,250	4	14	—	11·39	175 0	21 21	—	All from the same brood.
February	1890	do. ...	10,000	4	$3\frac{14}{16}$	—	8·40	93 $44\frac{1}{2}$	9 $34\frac{1}{2}$	—	
November	1890	do. ...	10,400	9	$1\frac{8}{16}$	—	17·44	267 0	25 67	—	
Do.	1902	Periya Paar Karai* ...	2,000	—	$5\frac{26}{32}$	—	2·91	26 50	13 25	$3\frac{1}{4}$ to $3\frac{1}{2}$	
Do.	1902	South-East Cheval ...	12,000	2	$17\frac{3}{16}$	—	4·76	123 0	10 25		
Do.	1902	Mid-East Cheval ...	1,000	—	$5\frac{7}{32}$	—	5·22	18 17	18 17		
Do.	1902	North-East and Northern Cheval ...	2,000	—	$9\frac{5}{32}$	—	4·58	46 25	23 $12\frac{1}{2}$		
February	1903	North-East and Northern Cheval ...	4,000	1	$4\frac{26}{32}$	—	6·20	99 89	25 —	$3\frac{1}{2}$ to $3\frac{3}{4}$	All the same brood.
Do.	1903	Periya Paar Karai ...	3,000	—	$15\frac{19}{32}$	—	5·19	66 73	22 25		
Do.	1903	South-East Cheval ...	15,000	4	$14\frac{14}{32}$	—	6·29	290 0	19 27		
Do.	1903	Mid-East Cheval ...	6,000	2	$4\frac{16}{32}$	—	7·41	121 54	20 26		
Do.	1904	South-West Cheval ...	12,000	7	$13\frac{4}{16}$	—	12·76	432 14	36 1	$4\frac{1}{2}$ to $4\frac{3}{4}$	
Do.	1904	North-West Cheval ...	7,200	2	18	—	8·06	243 0	33 75		
March	1904	Mid-West Cheval ...	6,000	2	$1\frac{2}{16}$	—	6·85	121 51	20 25		

* From this valuation forwards the weight of shell pearls was excluded from the total.

No. 3.

The PRINCIPAL CIVIL MEDICAL OFFICER and INSPECTOR-GENERAL OF HOSPITALS to the Hon. the COLONIAL SECRETARY.

Colombo, June 6, 1904.

No. 761. *Pearl Fishery.*

SIR,—I HAVE the honour to forward copy of Dr. Spittel's report on the late Pearl Fishery.

I am, &c.,

A. PERRY,
Principal Civil Medical Officer
and Inspector-General of Hospitals.

Enclosure in No. 3.

The CHIEF MEDICAL OFFICER, Pearl Fishery Camp, Marichchikaddi, to the PRINCIPAL CIVIL MEDICAL OFFICER and INSPECTOR-GENERAL OF HOSPITALS, Colombo.

May 31, 1904.

SIR,—I HAVE the honour to submit my report on the Pearl Fishery of the current year.

I was in medical charge of the pearl fishery camp at Marichchikaddi from the 13th of March till the 22nd April. The medical staff of the camp consisted of the following officers, who worked under my supervision :—

(1) Dr. C. Somasundaram was in charge of the general hospital and outdoor dispensary.

(2) Apothecary Moonyaiah acted as health officer, and inspected all the vessels arriving at the port.

(3) Apothecary Arulambalam was in charge of the infectious diseases hospitals, and inspected the divers' quarters and bazaars daily in order to detect the concealment of sickness.

(4) Apothecary K. Nagamuttu was the apothecary of the general hospital, and was in charge of the hospital stores, equipment, and disinfectants.

(5) Apothecary A. M. de Silva acted as apothecary of the outdoor dispensary.

Water Supply.

Except in the case of the officials, who obtained water from a well at Karadikully, a village situated about two miles away from the camp, water for drinking and cooking was obtained from a tank called Addapankulum, situated at the eastern limit of the camp. This tank was well secured. Patrols were appointed to prevent the people from polluting the water. Immediately next the bund of the tank there was a large cemented cistern, into which water was conducted through a pipe, and twelve coolies under an overseer issued out water to those who came for it from 6 A.M. till 6 P.M. No one was allowed to use the vessels brought by them to take water from the cistern.

At the commencement of the fishery the tank was nearly full, and at the close of it the tank, though not replenished by rain, had still a quantity of water which would have lasted for a month or two. The quality of the water, according to the Government Analyst, was not quite satisfactory. Henkin's method was carried out to improve it, and though about 30,000 people used the water for a period of more than a month, I was not able to trace a single case of illness to the use of impure water.

Sanitation.

The sanitary condition of the camp was very satisfactory. Disinfectants were freely used. 120 coolies and 16 overseers worked under the supervision of the Sanitary Officer of Jaffna and Mr. Apothecary Arulambalam.

Health.

The health of the camp was most satisfactory. Malarial fever, though present, did not prevail to any great extent, as during the previous year. Most of the cases that occurred were of a mild intermittent type, and readily yielded to treatment. Only 293 cases of malarial fever were treated at the dispensary, and 32 were admitted into the hospital. These figures compare very favourably with those of the fishery of the previous year, which were 2,722 and 100 respectively. Both at the outdoor dispensary and hospital there were only eighteen admissions for dysentery. Two cases of acute diarrhœa occurred : one was that of a man who took ill while on board the ss. Amra a few hours after he embarked at Paumben. On arrival he was found to be in a state of collapse and expired in about twelve hours. The other case was also that of a man who came from India. The symptoms set in three days after his arrival at the camp, and he expired within forty-eight hours. In both these cases the disease was most probably caused by unwholesome food. The camp was quite free from cholera, smallpox, chickenpox, and measles.

From the commencement of the fishery till its close thirty-two deaths occurred in camp, including the death of a diver from apoplexy due to drowning. Of the thirty-two deaths, ten took place in hospital.

Owing to the shifting nature of the population of the camp, it is hardly possible to make a correct estimate of the death-rate. If the number of people in the camp be taken at 30,000, which I think would be a close estimate, the death-rate would be 1·06 per 1,000.

Weather.

During nearly the whole period of the fishery the weather was very hot and dry. The nights during the first twelve or fifteen days were cold and dewy, only a slight shower or two of rain having fallen with the setting in of the small south-west monsoon early in April.

Hospitals.

The general hospital consisted of two wards. A male ward with accommodation for sixteen patients, and a female ward capable of accommodating eighteen patients. In connection with it there were two latrines, a storeroom, a kitchen, a servants' room, and a dead-house.

Food of Patients.—A contractor supplied cooked food. The scale of diets was the same as in other hospitals. The cooking was done in the kitchen attached to the hospital, and the cooking utensils belonged to Government. The raw provisions and the cooked food were inspected daily, and were, except on one or two occasions, found to be satisfactory both as regards quality and quantity.

Water.—Water for all purposes was obtained from the Adappenkulam tank. The drinking water was always boiled and filtered. The filters used were new Lipscombe's patent filters.

Latrines.—The latrines were conducted on the dry-earth system, and the night soil was removed twice a day and buried in the jungle outside the boundary of the camp.

Equipment.—The hospital was provided with an ample supply of equipment of very good quality. When the fishery closed the linen used by the patients was destroyed, and the unused linen and the non-perishable articles were given in charge of the Storekeeper in Marichchikaddi.

Numbers treated, &c.—Seventy-four patients were admitted into hospital. The average daily sick was 7·64. Of the total number treated, ten proved fatal, showing a mortality of 13·51 per cent. The diseases which caused the largest number of admissions were malarial fever and pneumonia, of which there were twenty-seven and eleven cases respectively.

Besides the general hospital, there were two infectious diseases hospitals with all the necessary outhouses attached, one for cholera and the other for smallpox, each having two wards with accommodation for twenty-four patients. There was also a house of observation for the accommodation of eight patients intended for the admission of suspicious cases of infectious diseases. These hospitals were provided with a separate supply of drugs, equipment, disinfectants, &c. I was also well provided with drugs, &c., to be used in the event of an outbreak of plague.

Outdoor Dispensary.

The number of patients treated at the outdoor dispensary was 815. The prevailing diseases were malarial fever, diarrhœa, rheumatic affections, and ulcers.

Statements showing the number of patients and the diseases for which they were admitted are hereto annexed.

FRED. G. SPITTEL,
Chief Medical Officer, Pearl Fishery Camp.

Return of Diseases treated at the Outdoor Dispensary, Pearl Fishery Camp, Marichchikaddi, from March 14 to April 25, 1904.

I.—General Diseases.

Group A.

Diseases.	New Admissions only
Dysentery	16
Malarial fever	293
Primary syphilis	2
Secondary syphilis	5
Congenital syphilis	2
Group B.	
Worms	2
Group D.	
Rheumatic affections	36
All other general diseases	36
II.—Local Diseases.	
Diseases of the nervous system	13
Do. eye	15
Do. ear	6
Do. respiratory system	23
Diarrhœa	57
Other diseases of digestive system	80
Diseases of spleen	5
Urinary system	7
Organs of locomotion	40
Connective tissue	54
Skin	43
Ulcers	52
General injuries	7
Local injuries	21
	815

Statement Showing the Number of Cases treated in the General Hospital at the Pearl Fishery Camp, Marichchikaddi, from March 13 to April 25, 1904.

Diseases.	Admitted.	Discharged.	Died.	Remaining.
Dysentery ...	2	1	1	—
Malarial fever, intermittent ...	27	27	—	—
Malarial fever, remittent ...	5	4	1	—
Pyæmia ...	1	—	1	—
Debility ...	3	3	—	—
Bronchitis ...	5	5	—	—
Pneumonia, lobular ...	11	7	4	—
Acute pneumonic phthisis ...	1	1	—	—
Pleurisy ...	5	3	2	—
Diarrhœa ...	5	4	1	—
Colic ...	2	2	—	—
Piles ...	2	2	—	—
Paraphimosis, not venereal ...	1	1	—	—
Burns and scalds ...	1	1	—	—
Bruise or contusion ...	2	2	—	—
Wound, lacerated ...	1	1	—	—
	74	64	10	—

No. 4.

Returns furnished by the Postmaster-General.

Statement of the Weights of Parcels containing Pearls sent to India from Pearl Fishery Post Office from March 20, 1904, to April 30, 1904.

Station to	Value. Rs. c.	Weight. lb. oz.
Bombay ...	82,825 0	172 13½
Calcutta ...	3,600 0	1 5¾
Madras ...	600 0	1 6¾
Surat ...	17,150 0	69 0
	104,175 0	244 10

Statement of Messages received at the Pearl Fishery Telegraph Office from March 1 to April 30, 1904.

Description of Message.	March.	April.	Total.
Inland received ...	1,207	1,275	—
Indian do. ...	428	651	—
Inland State ...	170	268	—
	1,805	2,194	3,999

Statement of Telegrams despatched from the Pearl Fishery Telegraph Office from March 1 to April 30, 1904.

Date.	Urgent Private.		Ordinary Private.		Press.		Express Paid and Reply Paid.	Indo-Ceylon Reply Paid.	Foreign.		Bearing Sent.	Indo-Ceylon.		Free Sent.	Re-addressed Sent.	Indo-Foreign Sent.	T. M. O.	Inland Free State Urgent.	Inland Free State Ordinary.
	No.	Rs. c.	No.	Rs. c.	No.	Rs. c.	Rs. c.	Rs. c.	No.	Rs. c.	Rs. c.	No.	Rs. c.						
March ...	28	52 90	1,960	599 0	—	—	414 30	16 10	1	13 65	8 0	214	1,112 43	63	—	5	64	105	123
April ...	37	81 25	1,534	455 40	1	1 0	667 85	19 65	—	—	—	509	1,321 80	177	21	35	42	82	68

	Number.	Rs. c.
Total amount for March	—	2,228 38
Total number of all messages ...	2,572	—
Total amount for April	—	2,546 95
Total number of all messages ...	2,506	—
	5,078	4,775 33

Statement of Telegraph Stamps sold at the Pearl Fishery Telegraph Office from March to May, 1904.

	Rs. c.
March	1,460 0
April	3,300 0
May	285 78
	5,045 78

XIV.—1904.

PAPERS

RELATING TO THE

HARBOUR TUGS "SAMSON" AND "GOLIATH."

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 10 cents.

1904.

HARBOUR TUGS "SAMSON" AND "GOLIATH."

No. 1.

The Hon. the COLONIAL SECRETARY to the CHAIRMAN, Harbour Board.

No. 5. Colonial Secretary's Office,
Colombo, February 29, 1904.

SIR,—I AM directed by His Excellency the Governor to invite the opinion of the Harbour Board with reference to the two tugs "Samson" and "Goliath," recently purchased by Government for towing and other purposes in Colombo Harbour.

2. It will be convenient briefly to recapitulate the facts regarding the purchase of the tugs, the cost of their maintenance, and the use that is made of them.

3. In October, 1901, in view of the approaching completion of the Harbour Works, and more especially of the narrowing of the entrance to the Harbour, inquiry was made from the Principal Collector of Customs and the Resident Engineer of the Harbour Works, as to whether a tug was required, or would be required in the near future, for the Port of Colombo. These officers replied as follows :—

> "Two powerful steam tugs are, in our opinion, necessary for this port. These tugs should be suited to turning the biggest vessels—say 15,000-ton battleships—into their berths by towing fore and aft respectively. If ordered now, the tugs are not likely to reach this port for another year, by which time the entrance to the harbour will be greatly restricted, and their services will be required to assist in berthing ships."

4. On being asked to estimate the cost of such tugs, the Master Attendant submitted a specification, in which the probable cost was anticipated to be £12,000 for each vessel. By my letter of the 27th November, 1901, the specification was referred to the Harbour Board, and it was added that "His Excellency the Governor would be glad to have the opinion of the Harbour Board as to the necessity for the provision of two tugs of the description desired in view of the heavy expenditure involved."

5. The reply of the Chairman of the Board, dated 5th December, 1901, was as follows :—

> "In reference to your letter of 27th ultimo, annexing copy of a resolution by the Harbour Board on the subject of tugs for the port, I have the honour to state that in the opinion of the Board tugs would be equally necessary, whether the opening were left at 1,000 feet or reduced to 800 feet. With tugs it was considered that 800 feet was a sufficient opening. In the course of discussion the Harbour Works Engineer mentioned that the entrances of the new Dover harbour (a harbour of about equal area to the Port of Colombo) were designed at 800 feet and 600 feet apiece.
>
> *Resolution referred to.*
>
> "Read letter from Colonial Secretary asking the advice of the Board as to the necessity of purchasing two tugs for the work of the port.
>
> "Resolved,—That Government be informed that in the opinion of the Board two tugs are necessary; that, in view of the fact that the harbour entrance will be restricted to 750 feet in January next, the tugs should be obtained as early as possible; that in the case of delay occurring in obtaining the tugs to be purchased for the port, tugs should be chartered for immediate use, and that in the opinion of the Board no expense should be spared to ensure the vessels being of the most suitable design, and during their construction the work carefully supervised."

6. The unanimous opinion of the Board thus strongly expressed was accepted by Government, and the necessary arrangements were made for the purchase of the tugs, their construction being carried out during the year 1902 under the supervision of the Consulting Naval Architect to the Crown Agents, Sir E. J. Reed. In April, 1902, the Crown Agents informed the Government that the lowest tender was £29,500 for the two tugs (or £5,500 in excess of the cost estimated by the Master Attendant), and £4,000 for expenses of navigation to Colombo. The Government having informed the Harbour Board, a resolution was passed stating that the cost was considerably in excess of that expected by the Board. It was again stated, however, that two tugs of the specification laid down were required for the use of the port, and Government therefore gave instructions for the acceptance of the tender of £29,500, and at the same time a copy of the resolution of the Harbour Board was transmitted to the Crown Agents. To this the Crown Agents replied as follows:—

> "As to the cost of the tugs, commented on by the Board, I would point out that a few years ago the cost of shipbuilding rose more than 40 per cent., and that it is still much above the level at which it stood before that rise. Prices paid for vessels built so recently as five or six years ago are, therefore, no guide to those of the present day.

"Competitive tenders were invited from eleven selected firms, eight of whom tendered, and the contract has been let to the firm submitting the lowest tender. There is, therefore, no ground for considering that the tugs could have been obtained cheaper unless by going to firms of less standing or experience, a course which would not be in the interest of the Ceylon Government."

It may be added that the ultimate cost of the tugs, including cost of despatch to Colombo and necessary repairs on arrival, amounted to Rs. 520,000 approximately.

7. The tugs arrived in the early part of 1903, and the question arose as to what fees, if any, should be charged for their use. In my letter of 11th June, 1903, the opinion of the Board was asked "regarding the question as to whether fees should be charged for the use of the tugs "Samson" and "Goliath," or whether the pilotage fees should be increased."

To this letter no direct reply appears to have been received, but on the 15th July, 1903, the Chairman of the Board wrote as follows:—

"I have the honour to annex copy of a resolution from the minutes of a meeting of the Colombo Harbour Board held on the 13th instant, and to inquire whether information can be obtained on this point.

"The serious increase of expenditure, amounting to over Rs. 60,000, involved in the maintenance of the tugs is not in the opinion of the Board commensurate with the advantages obtained by their use at the present time, but in the event of their being indispensable when the Graving Dock is completed, it would be necessary to retain them.

Resolution referred to.

"The Master Attendant brought up the question of charges for tugs, and the matter was discussed at considerable length.

"It was decided that inquiry should be made through Government whether the tugs are indispensable for taking vessels in and out of the Graving Dock."

The Rs. 60,000—approximate cost of maintenance of the two tugs—was, it is understood, arrived at as follows:—

Expenses of each Tug.

	Rs.	Rs.
Coal	12,000 to	13,000
Salaries...	11,000 to	12,000
Stores	3,000 to	4,000
Slip	1,025 to	1,025
Repairs...	1,000 to	1,000
Total ...	28,025 to	31,025

8. The Government were not in a position to answer the question regarding the possible indispensability of the tugs on completion of the Graving Dock, but inquiries were instituted as to whether the cost of maintenance could be reduced. No material reduction appeared feasible, but in the meantime the following further resolution was received from the Harbour Board:—

"The Chairman brought before the Board the question of the use of the tugs. It was resolved that, in view of the great cost of upkeep, the tugs should be used month about, and that only one crew should be employed. The use of the tugs should be optional, and a small fee should be levied for its services. The Master Attendant was requested to submit a scale of fees based on the actual cost of working the tug."

9. The proposals of the Harbour Board were approved, and ultimately the following scale of fees was agreed upon:—

	Rs.
For vessels up to 2,499 tons	10
For vessels of from 2,500 to 4,999 tons	15
For vessels of from 5,000 to 7,499 tons	20
For vessels of from 7,500 to 9,999 tons	25
For vessels of from 10,000 and over	30

After due notice had been given, fees on this scale were levied from 15th November, 1903.

10. From May up to 14th November, 1903, the tugs had towed in without fee 631 ships (viz., the "Goliath" 529 from 19th May to 14th November, and the "Samson" 102 from 29th July to 14th November), but as soon as even the small fees approved by the Harbour Board began to be charged the use of the tugs was practically discontinued, their services having been requisitioned only forty-two times between the 15th November, 1903, and the 14th February, 1904, the fees earned during that period being Rs. 960. It will thus be seen that the receipts of the tugs do not at present amount to anything approaching the monthly expenditure.

11. In these circumstances His Excellency the Governor considers that the whole question requires the careful reconsideration of the Board. It is, he believes, admitted that the tugs, which were purchased at a large initial cost, are now in a thoroughly good state of repair, and are in every way suitable for the work expected of them. Their cost of maintenance, however, is unavoidably large, while, on the other hand, the small use made of their service, although the width of the entrance to the harbour has now almost reached its minimum, appears to indicate that the necessity for their aid is not so great as was originally anticipated. In any case it would appear to be questionable whether it is worth while to retain both tugs.

12. His Excellency will, therefore, be glad if the Board will give this matter their very careful attention and report, with as little delay as possible consistent with full inquiry into all the facts, whether they still advise the retention of either or both of the tugs.

I am, &c.,

A. G. CLAYTON,
for Colonial Secretary.

No. 2.

The Hon. the COLONIAL SECRETARY to the CHAIRMAN, Harbour Board.

No. 7. Colonial Secretary's Office,
Colombo, March 22, 1904.

The Tugs "Samson" and "Goliath."

SIR,—WITH reference to my letter dated 29th February, 1904, requesting the Harbour Board to be good enough to report, after full inquiry, whether they advise the retention of either or both of the tugs referred to, in view of the heavy unremunerative expenditure involved, I am to request that in deciding the question put to them the Board will consider the further point that it would be necessary, in case the retention of the tugs is advised, to insure these vessels against accident at an estimated annual cost of Rs. 4,220 for each.

2. I am to take this opportunity of inquiring when the report of the Board may be expected.

I am, &c.,
A. R. SLATER,
for Colonial Secretary.

No. 3.

The CHAIRMAN, Harbour Board, to the Hon. the COLONIAL SECRETARY.

No. 2. H. M. Customs,
Colombo, March 23, 1904.

Steam Tugs for Port of Colombo.

SIR,—I HAVE the honour to inform you that I submitted to the Harbour Board at their meeting held on the 21st instant your letter No. 5 of the 29th ultimo on the subject of the tugs "Samson" and "Goliath," recently purchased by Government for towing and other purposes in Colombo Harbour.

2. It was resolved that in the opinion of the Board the use of powerful tugs of the type purchased is necessary. While the risk to each individual ship entering the port without the use of a tug is trifling, the cumulative risk to the port of all shipping entering without use of such tug is considerable. In the interest, therefore, of the port the use of the tugs should be made compulsory, and the cost of their use met by an addition to the pilotage fees.

I am, &c.,
W. H. JACKSON,
Chairman, Harbour Board.

No. 4.

The CHAIRMAN, Harbour Board, to the Hon. the COLONIAL SECRETARY.

No. 4. H. M. Customs,
Colombo, March 23, 1904.

The Tugs "Samson" and "Goliath."

SIR,—IN reference to your letter No. 7 of the 22nd instant, I have the honour to refer you to my letter No. 2 of this date, and to add that cost of insurance should be included in the additional pilotage fees as part of the necessary expenditure on the tugs.

I am, &c.,
W. H. JACKSON,
Chairman, Harbour Board.

No. 5.

The CHAIRMAN, Harbour Board, to the Hon. the COLONIAL SECRETARY.

No. 7. H. M. Customs,
Colombo, March 24, 1904.

Steam Tugs "Samson" and "Goliath."

SIR,—IN reference to my letter No. 2 of the 23rd instant, I have the honour to forward for your information copy of letter of 23rd idem from the Hon. Mr. W. H. Figg, and to state that he is a partner in the firm of Messrs. Whittall & Co., the Agents of the Orient Pacific Steamer Line.

I am, &c.,
W. H. JACKSON,
Chairman, Harbour Board.

Enclosure in No. 5.

The Hon. Mr. W. H. FIGG to the Hon. the PRINCIPAL COLLECTOR OF CUSTOMS.

Colombo, March 23, 1904.

SIR,—I HAVE the honour to acknowledge receipt of the minutes of a meeting of the Harbour Board held on the 21st instant, which I much regret I was unable to attend.

I note the resolution passed on the subject of the Government tugs, and now write to ask you to be so good as to record my protest against making the use of the tugs compulsory. I admit that

during certain seasons of the year the tugs may be of use to the larger ships having a single screw, and in such cases no doubt their services would be gladly availed of. The policy, however, of forcing the use of these tugs is not one which commends itself to me, and is, in my opinion, not only unwise, but unjust.

I submit that it is the policy of Government to do all possible to make this port popular in order to encourage steamers to call here, but action such as this will call forth a strong protest from all owners of vessels calling here, which is to be regretted.

I have, &c.,
W. HENRY FIGG.

No. 6.

The Hon. the COLONIAL SECRETARY to the CHAIRMAN, Harbour Board.

No. 8. Colonial Secretary's Office,
Colombo, April 15, 1904.

Steam Tugs "Samson" and "Goliath."

SIR,—WITH reference to your letters Nos. 2, 4, and 7 of 23rd, 23rd, and 24th March, 1904, respectively, on the subject of the use of the steam tugs "Samson" and "Goliath," I am directed to state that it has been decided by Government to print and circulate the papers relating to these tugs, and, after adequate time for consideration has been given, to move a resolution in the Legislative Council—every opportunity being given for full and free discussion—that the use of the tugs be made compulsory, and that the cost of their use be met by additional pilotage fees, or that in the alternative the tugs be sold. Meanwhile I am to request that the Harbour Board will state what addition to the pilotage fees they would recommend in the event of its being decided to retain the tugs.

2. I am to add for the information of the Board that the total expenditure incurred on account of staff and upkeep of the tugs up to 31st December, 1903, is reported by the Master Attendant to have been Rs. 49,574·14.

I am, &c.,
A. G. CLAYTON,
for Colonial Secretary.

No. 7.

The CHAIRMAN, Harbour Board, to the Hon. the COLONIAL SECRETARY.

No. 11. H. M. Customs,
Colombo, May 16, 1904.

Tugs "Samson" and "Goliath"

SIR,—IN reference to your letter No. 9 of the 6th instant, I have the honour to state that at the Harbour Board Meeting held this day the question of meeting the cost of the two harbour tugs was further considered.

2. I submit an estimate by the Master Attendant showing that the upkeep, insurance, and depreciation of each tug amounts yearly to Rs. 68,026, or of the two tugs to Rs. 136,052.

3. The Board passed the following resolution :—"That a scale on the base of six cents per ton (net register)—in accordance with the table drawn up by the Chairman for harbour dues on every vessel entering the port—be adopted. This would bring in an increased sum of Rs. 126,000, which would almost meet the sum required. The deficiency to be met from the general revenue of the port."

4. I annex a copy of the proposed scale.

I am, &c.,
W. H. JACKSON,
Chairman, Harbour Board.

Annexures.

Dues payable by Ships entering the Port.

Tonnage Scale.	Number of Vessels in 1903.	Rate. Rs.	Amount. Rs.
Up to 50	288	3	864
From 50 to 100	237	6	1,422
100 to 150	174	9	1,566
150 to 200	167	12	2,004
200 to 300	87	18	1,566
300 to 400	66	24	1,584
400 to 500	2	30	60
500 to 700	47	42	1,974
700 to 900	9	54	486
900 to 1,100	29	66	1,914
1,100 to 1,300	47	78	3,666
1,300 to 1,500	257	90	23,130
1,500 to 1,800	155	108	16,740
1,800 to 2,000	107	120	12,840
2,000 to 2,200	200	132	26,400
2,200 to 2,400	194	144	27,936
2,400 to 2,600	163	156	25,428
2,600 to 2,800	178	168	29,904
2,800 to 3,000	145	180	26,100

Tonnage Scale.	Number of Vessels in 1903.	Rate. Rs.	Amount. Rs.
3,000 to 3,200	125	192	24,000
3,200 to 3,400	137	204	27,948
3,400 to 3,600	97	216	20,952
3,600 to 3,800	102	228	23,256
3,800 to 4,000	92	240	22,080
4,000 to 4,200	37	252	9,324
4,200 to 4,400	37	264	9,768
4,400 to 4,600	14	276	3,864
4,600 to 4,800	35	288	10,080
4,800 to 5,000	26	300	7,800
5,000 to 5,200	11	312	3,432
5,200 to 5,400	Nil	324	—
5,400 to 5,600	Nil	336	—
5,600 to 5,800	2	348	696
5,800 to 6,000	2	360	720
6,000 to 6,200	Nil	372	—
6,200 to 6,400	7	384	2,688
6,400 to 6,600	5	396	1,980
6,600 to 6,800	13	408	5,304
6,800 to 7,000	5	420	1,680
7,000 to 7,200	Nil	432	—
7,200 to 7,400	1	444	444
7,400 to 7,600	Nil	456	—
7,600 to 7,800	Nil	468	—
7,800 to 8,000	Nil	480	—
8,000 to 8,200	Nil	492	—
8,200 to 8,400	1	504	504
	3,300	Total	382,104

Estimate of Annual Expenditure for one Tug.

	Rs.
Salaries	17,970
Coal	25,550
Slipping	2,340
Insurance	4,220
Depreciation	11,250
Stores	3,666
Fenders	600
Two hawsers	480
Hartman's paint	1,100
Hose	850
Total	68,026

N.B.—This estimate was furnished by the Master Attendant, Colombo.

XV.—1904.

TOLLS AND ARRACK RENTS BILL.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance for the better enforcement of certain conditions in the Sales of Tolls and Arrack Rents."

Ordered by the Legislative Council to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 5 cents.

1904.

EXTRACT from the Minutes of the Legislative Council dated July 13, 1904.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled "An Ordinance for the better enforcement of certain conditions in the Sales of Tolls and Arrack Rents":—

The Hon. Mr. A. G. LASCELLES, K.C., Attorney-General.
The Hon. Mr. F. R. ELLIS, C.M.G., Auditor-General.
The Hon. Mr. S. C. OBEYESEKERE,
The Hon. Mr. J. VAN LANGENBERG, } Unofficial Members.

TOLLS AND ARRACK RENTS BILL.

THE Sub-Committee recommend that the operation of the Bill should be extended to opium licenses issued under the provisions of "The Opium Ordinance, 1899."

They recommend the following amendments, which, with the exception of the amendment in section 2 already approved of by the Council, a further verbal amendment in clause (*b*) of the same section, and the section added as section 6, are necessary in order to give effect to the above-mentioned recommendation :—

Amendments recommended.

Title of Ordinance.—For the words "Tolls and Arrack Rents" to substitute the words "Tolls, Arrack Rents, and Opium Licenses."

Preamble.—In line 3 for the words "tolls and arrack rents" substitute the words "tolls, arrack rents, and opium licenses."

Section 1.—For the words "The Tolls and Arrack Rents Ordinance, 1904," substitute "The Tolls, Arrack Rents, and Opium Licenses Ordinance, 1904."

Section 2.—(*a*) Line 4 : after the word "canal" to insert "or license to sell opium under 'The Opium Ordinance, 1899.'"

(*b*) Line 5 : for the words "it is stipulated" to substitute "or by any local authority, it has been or shall be stipulated whether before or after the passing of this Ordinance."

(*c*) Clause (*a*), line 1 : after the words "government agent" to insert the words "or the proper authority."

Line 2 : for words "privilege or exclusive right" to substitute the words "privilege, exclusive right, or license."

(*d*) *Clause* (*b*).—Line 1 : after the words "government agent" to insert the words "or the proper authority."

Line 2 : for the words "privilege or exclusive right" to substitute the words "privilege, exclusive right, or license."

Line 6 : after the word "administrators" to insert the words "or executors."

Line 7 : after the words "government agent" to insert the words "or the proper authority."

(*e*) *Clause* (*c*).—At the end of the clause to add the words "or with the local authority."

(*f*) In the last line but 3 of the section after the words "government agent" to insert the words "or the proper authority."

Section 3.—Line 3 : after the words "government agent" to insert the words "or the proper authority."

Section 4.—(*a*) Line 2 : for the words "privilege or exclusive right" to substitute the words "privilege, exclusive right, or license."

(*b*) Lines 3 and 6 : after the words "government agent" to insert the words "or the proper authority."

(*c*) Lines 8 and 9 : for the words "privilege or exclusive right" to substitute the words "privilege, exclusive right, or license."

Section 5.—Line 3 : before the word "letter" to insert the word "registered."

Section 6.—To add new section as follows :—

Saving of legal remedies of Renter.—When a Government Agent or the proper authority has enforced any of the penalties mentioned in section 2, nothing in this Ordinance shall be taken to prevent a court of competent jurisdiction from ordering the refund to the renter of any sum deposited by him which may have been forfeited, or from awarding damages to him, if it is proved that he has not made such default in observing the conditions of sale as to entitle the Government Agent or the proper authority to enforce the same.

Legislative Council Chamber,
Colombo, July 27, 1904.

ALFRED G. LASCELLES.
F. R. ELLIS.
S. C. OBEYESEKERE.
J. VAN LANGENBERG.

XVI.—1904.

INVENTIONS BILL.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance to amend the Law relating to the granting of Exclusive Privileges to Inventors."

Ordered by the Legislative Council to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 5 cents.

1904.

EXTRACT from the Minutes of the Legislative Council dated July 13, 1904.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled "An Ordinance to amend the Law relating to the granting of Exclusive Privileges to Inventors":—

The Hon. Mr. A. G. LASCELLES, K.C., Attorney-General.
The Hon. Mr. F. A. COOPER, C.M.G., Director of Public Works.
The Hon. Mr. W. H. JACKSON, Principal Collector of Customs.
The Hon. Mr. W. H. FIGG,
The Hon. Mr. J. VAN LANGENBERG, } Unofficial Members.

INVENTIONS BILL.

THE Sub-Committee recommend the adoption of the Ordinance, subject to the following amendments :—

Section 1.—In line 4 and also in the last line of the section to substitute 1904 for 1902.

Section 2.—In line 4 after the word "agent" to insert the word "resident."

Section 3 (5 A).—In the penultimate line after the word "filed" to insert the words "in Ceylon."

Section 4.—The following section shall be added as section 4 of the Bill, namely :—

4. The following further proviso shall be added to sub-section (1) of section 12 of the principal Ordinance, namely :—

Provided further that, subject to the provisions of sub-section (6) of section 44 A, the petition for leave to file the specification of an invention and the drawings, if any, accompanying or left in connection with the petition shall not be open to inspection until an order has been made authorizing such specification to be filed.

Section 5 (*now 6*), *Sub-section* (*3*).—In the penultimate line after the word "authorizing" to insert the words "him to file the."

ALFRED G. LASCELLES.
FRANCIS A. COOPER.
W. H. JACKSON.
W. HENRY FIGG.
J. VAN LANGENBERG.

Legislative Council Chamber,
Colombo, July 27, 1904.

XVII.—1904.

TRADE MARKS BILL.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance to amend the Law relating to the Registration of Trade Marks in Ceylon."

Ordered by the Legislative Council to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 5 cents.

1904.

EXTRACT from the Minutes of the Legislative Council dated July 13, 1904.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled "An Ordinance to amend the Law relating to the Registration of Trade Marks in Ceylon":—

The Hon. Mr. A. G. LASCELLES, K.C., Attorney-General.
The Hon. Mr. F. A. COOPER, C.M.G., Director of Public Works.
The Hon. Mr. W. H. JACKSON, Principal Collector of Customs.
The Hon. Mr. W. H. FIGG,
The Hon. Mr. J. VAN LANGENBERG, } Unofficial Members.

TRADE MARKS BILL.

THE Sub-Committee recommend the adoption of the Bill, subject to the following amendment:—

In section 1 in line 2 and also in the last line to substitute the figures 1904 for 1902.

Legislative Council Chamber,
Colombo, July 27, 1904.

ALFRED G. LASCELLES.
FRANCIS A. COOPER.
W. H. JACKSON.
W. HENRY FIGG.
J. VAN LANGENBERG.

XVIII.—1904.

REGISTRATION OF DESIGNS BILL.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance for the Registration of Designs."

Ordered by the Legislative Council to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 5 cents.

1904.

EXTRACT from the Minutes of the Legislative Council dated July 13, 1904.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled "An Ordinance for the Registration of Designs":—

The Hon. Mr. A. G. LASCELLES, K.C., Attorney-General.
The Hon. Mr. F. A. COOPER, C.M.G., Director of Public Works.
The Hon. Mr. W. H. JACKSON, Principal Collector of Customs.
The Hon. Mr. W. H. FIGG, } Unofficial Members.
The Hon. Mr. J. VAN LANGENBERG, }

REGISTRATION OF DESIGNS BILL.

THE Sub-Committee recommend the adoption of the Bill, subject to the following amendment, namely :—

In section 5 (2) after the word "agent" in the penultimate line to insert the word "resident."

Legislative Council Chamber,
Colombo, July 27, 1904.

ALFRED G. LASCELLES.
FRANCIS A. COOPER.
W. H. JACKSON.
W. HENRY FIGG.
J. VAN LANGENBERG.

XIX.—1904.

CACAO THEFTS BILL.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance to prevent Thefts of Cacao."

Ordered by the Legislative Council to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 5 cents.

1904.

EXTRACT from the Minutes of the Legislative Council dated July 13, 1904.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled "An Ordinance to prevent Thefts of Cacao":—

The Hon. Mr. A. G. LASCELLES, K.C., Attorney-General.
The Hon. Mr. H. L. CRAWFORD, Acting Treasurer.
The Hon. Mr. H. WACE, C.M.G., Government Agent, Central Province.
The Hon. Mr. S. C. OBEYESEKERE,
The Hon. Mr. S. N. W. HULUGALLE,
The Hon. Mr. GILES F. WALKER,
The Hon. Mr. W. D. GIBBON,
The Hon. Mr. J. VAN LANGENBERG,
} Unofficial Members.

CACAO THEFTS BILL.

THE Sub-Committee recommend the adoption of the Bill, subject to the following amendments :—

Section 2 (1).—After the word " district " in line 2 to insert the word " village."

Section 4.—To add at the beginning of the section the words "subject to the provisions of section 5 (4)."

Section 5.—To add the following sub-sections, namely :—

(4) The Government Agent may also issue permits under his hand authorizing the persons to whom the same are granted to buy or procure from the persons named in the permit a specified quantity of cacao for seed purposes. The prohibitions and restrictions with regard to the sale and purchase of cacao in sections 4 and 9 of this Ordinance shall not apply to any case where cacao is purchased or procured in accordance with a permit granted under this sub-section.

(5) The Government Agent may also grant a special license to any dealer authorizing him under such conditions as the Government Agent may prescribe to purchase cacao at places other than his licensed premises.

Section 7.—(*a*) For the words "language most commonly spoken in the district" in line 3 to substitute the words "English, Sinhalese, and Tamil languages."

(*b*) For the words "one hundred" in the last line to substitute the word "fifty."

Section 9, Clause (a).—After the words " premises " in the last line of the clause to insert the words " unless he has been specially licensed under section 5 (5) to purchase cacao at such places."

Clause (b).—To delete the clause.

Clause (c), now (b.)—After the word " years " at the end of the clause to insert the words " or from any estate labourer."

Clause (d).—To re-letter clause (*c*).

Section 10.—To delete the section.

Section 11 (now 10), sub-section (1), line 4, to delete the words " or within two hours after.'

In sub-section (2) in line 5 to delete the words " in the Form C in the schedule hereto."

In sub-section (3) in line 4 to delete the words "or books."

Section 12 (now 11).—(*a*) In line 3 for the words " peace officer " to substitute the words "headman not below the rank of Korala."

(*b*) In the last line for the words " two months " to substitute the words "one month."

Section 14 (now 13).—After the word " Ordinance " in line 2 to delete the rest of the section and substitute the words " the Police Magistrate shall forward a copy of the proceedings to the Government Agent for his information."

Section 15 (now 14).—In line 4 to substitute the figure 11 for 12.

Section 16 (now 15).—After the word "discrepancy" in line 6 to insert the words "is due to natural causes or."

Section 17 (now 16).—(*a*) In line 3 to substitute the figure 11 for 12.

(*b*) In line 4 to delete the words " or is unable to obtain."

(*c*) In line 5 to delete the word " and."

Section 18 (now 17).—Sub-section (2) in lines 3, 4, and 5 to delete the words " he shall require him to give a full and satisfactory account of the same, and if such person refuses or is unable to give an account to the satisfaction of such officer."

Section 18.—To insert the following new section :—

18. Whenever any person gives information or makes complaint against another person of an offence against the last foregoing section, and it appears to the Police Magistrate who takes cognizance of the case that such information or complaint was false and was maliciously or corruptly given or made, he may sentence the informant or complainant to pay a fine not exceeding fifty rupees, or to undergo simple or rigorous imprisonment for a term not exceeding one month, and he may also award such compensation not exceeding fifty rupees to be paid by the informant or complainant to the person against whom the information was given or the complaint was made as the Police Magistrate thinks fit.

Schedule: Form B.—(*a*) In the title of form for the words "Form of Entry where Cacao is purchased" substitute the words "Form prescribed by Section 10."

(*b*) In the heading to the first column of the form for the words "Date of Purchase of Cacao" substitute the words "Date when Cacao is brought into Premises."

(*c*) Between column 2 and column 3 to insert two new columns headed respectively :—"3 If not purchased, how acquired" and "4 Description and Situation of Land in which Cacao was grown," and to re-number the following columns accordingly.

Form C.—To delete.

In concurring in the foregoing recommendations, the Hon. the Planting Member desires to reserve to himself liberty to move the further amendment of section 12 of the Draft Ordinance by the insertion of the words "Unofficial Police Magistrate" between the words "Police Magistrate" and the words "or for any Police Officer."

ALFRED G. LASCELLES.
H. L. CRAWFORD.
H. WACE.
S. C. OBEYESEKERE.
S. N. W. HULUGALLE.
GILES F. WALKER.
W. D. GIBBON.
J. VAN LANGENBERG.

Legislative Council Chamber,
Colombo, July 27, 1904.

XX.—1904.

ADMINISTRATION AND MINORS' ESTATES BILL.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance to amend in certain particulars the Law relating to the Administration of the Estates of Persons dying Intestate and to the Powers of District Courts to take charge of the Property of Minors and Wards."

Ordered by the Legislative Council to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 5 cents.

1904.

EXTRACT from the Minutes of the Legislative Council dated July 27, 1904.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled "An Ordinance to amend in certain particulars the Law relating to the Administration of the Estates of Persons dying Intestate and to the Powers of District Courts to take charge of the Property of Minors and Wards":—

The Hon. Mr. A. G. LASCELLES, K.C., Attorney-General.
The Hon. Mr. H. L. CRAWFORD, Acting Treasurer.
The Hon. Mr. S. C. OBEYESEKERE,
The Hon. Mr. J. VAN LANGENBERG, } Unofficial Members.

ADMINISTRATION AND MINORS' ESTATES BILL.

THE Sub-Committee recommend the adoption of the Draft Ordinance, subject to the following amendments :—

In Section 3.—(1) In line 4 of the added paragraph for the words "within their districts" to substitute the words "in Ceylon."

(2) In the following line for the word "Ceylon" to substitute "the Island."

(3) To add the following new paragraph, namely :—

Where the minor is not resident in Ceylon the Supreme Court or any judge thereof may make order directing and appointing such District Court as to the said Supreme Court or any judge thereof shall appear most expedient to have and exercise jurisdiction in respect of the appointment of a fit and proper person to take charge of the minor's property in Ceylon ; and the court so appointed shall have and exercise such jurisdiction accordingly.

Section 4.—(1) To delete sub-section (1).

(2) Sub-section (2) to stand as the section.

Section 5.—To add the following new section, namely :—

5. To the first paragraph of section 70 of "The Courts Ordinance, 1889," the following proviso shall be added, namely :—

Addition to Section 70 of "The Courts Ordinance, 1889."—Provided that it shall be lawful for the said Supreme Court or any judge thereof, in any case where it is necessary for the purposes of chapter XLVI. of the Civil Procedure Code to appoint an administrator to the estate and effects of a mortgagor who has died out of Ceylon, to make such order as aforesaid, notwithstanding that the mortgagor at his death was not possessed of property in Ceylon.

J. H. TEMPLER.
H. L. CRAWFORD.
S. C. OBEYESEKERE.
J. VAN LANGENBERG.

Legislative Council Chamber,
Colombo, August 17, 1904.

XXI.—1904.

WASTE LANDS ORDINANCES.

RETURNS

SHOWING

FOREST, CHENA, WASTE, AND UNOCCUPIED LANDS DECLARED CROWN PROPERTY DURING 1903.

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 45 cents.

1904.

WASTE LANDS.

A.—Annual Return of all Lots of Forest, Chena, Waste, and Unoccupied Lands declared to be the Property of the Crown under Ordinance No. 1 of 1897 during the Year 1903.

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent.	Claimants (if any).	Remarks.
WESTERN PROVINCE.					A. R. P.		
November 28, 1903	Weliamunehena	Udakanampella	C. S. 17	W 30	1 3 6	—	—
	Badannuwekele	do.	C. S. 17	N 31	4 2 30	—	—
	Waturanekele	do.	C. S. 17	O 31	0 2 10	—	—
Do.	Annasigala	Guruwala	C. S. 20	138	1 1 20	—	—
	Paruwatagala	do.	C. S. 20	139	11 0 20	—	—
Do.	Narangahakele	Walaramba	C. S. 27	28	9 1 3	—	—
Do.	Do.	Demalagama	C. S. 28	39*a*	8 1 32	—	—
					37 1 1		
CENTRAL PROVINCE. *Kandy District.*							
May 5, 1903	Monaragalapatana	Pussellawa in Udapalata	4,851	O 810	13 0 35	K. W. Don Cornelis Appuhamy and twelve others	—
				12,984	20 3 9		
				12,985	2 0 10		
					36 0 14		
Nuwara Eliya District. Nil.							
Matale District.							
February 4, 1903	Palleyaya	Kandangamuwa in Udugoda Pallesiya pattu of Matale North	1,162	4,368	267 0 0	—	—
May 8, 1903	Millawanakele	Wehera in Udugoda Pallesiya pattu of Matale North	2,405	7,780	384 0 0	—	—
	do.	do.	2,166	6,971	49 3 0	—	—
	Millawanakele	Millawana in Udugoda Pallesiya pattu of Matale North	2,166	6,972	22 1 34	—	—
	Gatukulagolatennemukalana or Oyadekele		2,405	7,781	166 0 0	—	—
May 8, 1903	do.		2,405	7,782	197 0 0	—	—
	do.		2,405	7,783	276 0 0	—	—
	do.		2,405	7,784	256 0 0	—	—
	do.		2,405	7,785	204 0 0	—	—
				Carried over ...	1,822 0 34		

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent.	Claimants (if any).	Remarks.
					A. R. P.		
			Brought forward ...		1,822 0 34		
September 15, 1903 ...	Amunamukalana ...	Puwakpitiya in Gampahasiya pattu of Matale South	4,745	12,779	67 0 0	—	—
September 2, 1903 ...	Nikadaulugolleyaya, Pallagolleyaya ...	Palleaswedduma in Pallesiya pattu of Matale East ...	W. L. O. S. No. 3 C.P.	1	41 2 8	—	—
				2	5 1 28	—	—
SOUTHERN PROVINCE. *Galle District.*					1,936 0 30		
February 6, 1903 ...	Hiwalgalgodadeniya ...	Dewalegama ...	35	35½	1 0 7	—	—
February 20, 1903 ...	Galduwebedda ...	Weragoda ...	5,152	10,965	7 2 31	—	—
Do. ...	Andipelesseowita, &c. ...	Dewalegama ...	35	33, 34, 35, 40	8 0 24	—	—
Do. ...	Marathanpitiyagala ...	do. ...	35	3	7 2 10	—	—
Do. ...	Hompolabokkegodella, &c. ...	do. ...	35	19, 20	4 1 28	—	—
Do. ...	Nekatunnedeniya ...	do. ...	35	8	4 0 27	—	—
March 27, 1903 ...	Yakkatumuneowita ...	Batapola ...	5,773	14,073	2 3 24	—	—
May 29, 1903 ...	Kohilawelakele, &c. ...	do. ...	6,154	15,919 } 15,920 }	42 0 39	—	—
June 5, 1903 ...	Dikgahagoipalepahalakele, &c. ...	do. ...	W. L. O. Survey	122, 182, 183, 184, 184¾, 185, 186, 188, 195, 196, 199, 200, 201, 202, 203, 204, 210, 211, 212, 223, 225, 233	458 0 20	1, Nanayakkarawasan Karijjewattege Don Siman de Silva Jayasuria; 2, D. H. D. W. Samarasekara; 3, Karijjewattege Karolis; 4, Korottagamage Philippu; 5, Ginigalgodage Ando; 6, Nanayakkarawasan Abeyratna Gunawardana Hendrick Silva; 7, Gurusinha Isaac de Silva; 8, Karijjawasan Bendigodagamage Jandiris de Silva; 9, Gurusinha Don Mathes de Silva; 10, Nanayakkara Godagamagamage Tomis de Silva; 11, Godagamagamage Janis de Silva; 12, Godagamagamage Isaac de Silva; 13, Bendigodagamage Ondiris de Silva; 14, Godagamagamage Senarat de Silva; 15, Godagamagamage Nandoris; and 16, Nanayakkaragodagamage Siman.	—

June 5, 1903	...	Doralamanana, &c.	...	Batapola	...	W. L. O. Survey	64, 65, 66, 67, 68, 71, 72, 73, 74, 75, 76, 77, 79, 81, 82, 83, 84, 92, 94, 95, 96, 97, 98, 102, 103	558 2 36	1, Godage Alwis de Silva; 2, Peduruhewa Amadoris; 3, Bastian de Silva Jayasuriya; 4, Gurusinha Don Isaac de Silva Appuhami; 5, Kariyawasan Bendigodagamage Jandris de Silva; 6, Gurusinha Don Mathes de Silva Appuhami; 7, Nanayakkara Godagamagamage Tomis de Silva; 8, Godagamagamage Janis de Silva; 9, Godagamagamage Isaac de Silva; 10, Bendigodagamage Andiris de Silva; 11, Galagamagamage Senarat de Silva; 12, Galagamagamage Nandoris; 13, Nanayakkara Godagamagamage Siman; 14, Nanayakkarawasan Karijjawattage Dollis de Silva; and 15, Nanayakkarawasan Karijjawattage Abeyratna Gunawardana Hendrik de Silva
								1,095 0 6	
Matara District.									
January 3, 1903	...	Kosgulanehena	...	Morawaka	...	40	109	0 3 16	—
Do.	...	Inillamullahena	...	Beralapanatara	...	33	241	2 3 20	—
Do.	...	Galpotteliyadda, &c.	...	Morawaka	...	40	97, 119½	6 1 35	—
Do.	...	Minuwanwiladeniya, &c.	...	do.	...	40	1, 2, 76, 82, 118	37 3 10	—
Do.	...	Dehigahahenya, &c.	...	do.	...	40	92, 95, 96, 98	273 0 3	—
Do.	...	Dalukgalakele	...	Ehalape and Ketanwila	...	5,359	11,867	3 2 12	—
Do.	...	do.	...	do.	...	5,359	11,870	4 0 35	—
Do.	...	do.	...	do.	...	5,359	11,866	4 1 7	—
Do.	...	Abakolahenyaya, &c.	...	Beralapanatara	...	33	380	69 3 35	1, Paranaliyanage Bala Etana; 2, Paranaliyanage Bilindu Hamy; 3, Gamage Don Davit; 4, Samarakonanagige Don Andris; 5, Singappuli Liyanage Sancho hami; and 6, Singappuli Liyanage Balahami, all of Beralapanatara
Do.	...	Galendehena *alias* Kongahahena	...	Kirinda	...	6,035	15,480	4 0 23	—
Do.	...	Udagalhena, &c.	...	Mologgammuwa	...	19	65	28 0 0	—
Do.	...	Battayankandurehena, &c.	...	Panakaduwa	...	17	1	204 1 12	1, Panakaduwa Hettiachchige Mateshami; 2, Jasinkandege Don Thomis; 3, Panakaduwegamage Don Davit; 4, Panakaduwegamage Don Siyadoris; and 5, Egodahewage Babahami

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent.	Claimants (if any).	Remarks.
					A. R. P.		
January 16, 1903	Kitulpelahena	Mologgamuwa	19	7	16 1 39	1, Konkaduwage Punchi Appu; and 2, Kiramage Ukkuhami of Mologamuwa	—
Do.	Pansalawattehena	Pasgoda	21	135	2 2 37	—	—
Do.	Denihena-atura, &c.	Ehalakanda	37	41, 44	97 3 12	—	—
Do.	Karayalwiladeniya, &c.	Dampahala	20	68*a*, 12	4 0 37	—	—
Do.	Tenahenyaya, &c.	Andaluwa	39	34, 35, 36, 40	90 2 12	—	—
Do.	Ratambaladeniyeatmaga	Ginnaliya	22	167	1 2 27	—	—
Do.	Hettigedeniyemulla, &c.	do.	22	76, 116, 117, 140, 160, 161, 162, 163, 164	293 3 24	Lewanage Wattuhami of Ginnaliya	—
Do.	Hettigedeniyehena, &c.	Beralapanatara	33	306	57 1 19	—	—
Do.	Polgahahenedolamukalana	do.	33	70	11 1 27	—	—
Do.	Dotalugalamukalana	do.	33	5	1 0 10	—	—
Do.	Gomamawilamukalana, &c.	do.	33	416	88 1 30	—	—
Do.	Edandawalahena	Urubokka	23	272	23 3 10	Don Nikulas Abewickrama of Urubokka	—
Do.	Budugedaradeniya, &c.	do.	23	42, 109	1 0 31	—	—
Do.	Hindakaraldeniyehena, &c.	Morawaka	40	93, 99	7 2 17	—	—
Do.	Narangahadeniya, &c.	do.	40	94, 79, 107	9 0 29	—	—
Do.	Berawawitagodahenyaya	Warakagoda	34	20	19 3 22	—	—
Do.	Palagalahena	Banagala	26	35	2 0 16	—	—
Do.	Wattagawadeniya	do.	26	34	0 1 12	—	—
Do.	Palagalahena *alias* Galwalakoratuwa	do.	26	38	1 2 13	—	—
Do.	Okandahena	do.	26	23	0 3 10	—	—
Do.	Godehena	do.	26	95	3 1 0	—	—
Do.	Migahagodella	do.	26	50	0 2 32	—	—
January 30, 1903	Horatennehena, &c.	Bengamuwa	18	171	114 1 29	1, Malawige Dingi Appu; 2, Nagahage Juwanis; 3, Nagodage Luwishami; 4, Korawege Simanhami; 5, Nagahage Huratalhami; and 6, Malawige Adrian, all of Bengamuwa	—
Do.	Bulugahakoratuwa, &c.	Beralapanatara	33	91, 93	12 2 37	Kotapola Talawattege Appu of Beralapanatara	—
Do.	Werahena	Andaluwa	39	25	11 1 12	—	—
Do.	Dandugahahena	do.	39	33	15 2 23	Don Samel Sepala Ratnayaka of Rotumba	—
Do.	Poddalaudadeniya	do.	39	39	1 1 18	—	—
Do.	Millagahadeniya	do.	39	46	0 3 32	—	—
Do.	Kotapanwiladeniya, &c.	Banagala	26	109, 111	4 3 0	—	—
Do.	Udakumburadeniya	do.	26	129	2 2 28	—	—
Do.	Andayamagawahena	Dampahala	20	14	13 0 20	—	—

January 30, 1903	...	Indiketiyehena	...	Dampahala	...	20					
Do.	...	Peellalanga Ihaladeniya	...	Waralla	...	41					
Do.	...	Udagangodahena	...	Mawarala	...	43	21	3	1	0	—
Do.	...	Dolapalleaddarahenyaya	...	Lewpotdeniya	...	31	25	0	1	25	—
Do.	...	Nadeniya	...	Paragala	...	16½	50	3	0	36	—
Do.	...	Masmullekele, &c.	...	Ullala		4,123	18	5	2	11	—
							58	7	2	4	—
							Portion of 10,700				
							10,700½				
						1,693	10,700¾	515	0	9	Patiranage Dingi Appu of Ullala
						4,116	2,526				
						4,092	10,472				
Do.	...	Godehena	...	Dampahala	...	20	10,318				
							1	7	1	27	1, Alutge Don Dines; 2, Abewardana Liyanage Don Martinus, both of Dampahala
Do.	...	Galhena, &c.	...	Peddapitiya	...	W.L.O.S. No. 96	A, C, E, J, O, P, Q, S, T	299	0	5	—
Do.	...	Pita-addarahena *alias* Udakumburahena		Banagala	...	26	116	1	3	38	—
Do.	...	Imbulgasgodamulla	...	Warakagoda	...	34	18	5	1	0	—
Do.	...	Udahitihena, &c.	...	Morawaka	...	40	23, 24, 36	7	3	14	—
Do.	...	Pinliyadda	...	Banagala	...	26	100	0	1	35	—
Do.	...	Kinihirigoda	...	Lewpotdeniya	...	31	26	3	2	25	—
Do.	...	Uruwakawalagawapatana, &c.	...	Banagala	...	26	68, 69	5	1	4	—
Do.	...	Mahakumburehena	...	Andaluwa	...	39	54	30	3	10	—
Do.	...	Panwiledeniya	...	Beralapanatara	...	33	333	5	2	10	—
Do.	...	Urapilissumulla	...	Andaluwa	...	39	47	1	2	36	—
February 6, 1903	...	Ambagahawila, &c.	...	Mawarala	...	43	2, 7, 18, 19, 20, 157, 158, 159, 160, 161, 163, 23, 60, 68, 69, 88, 90, 91, 162, 93, 95, 96, 98, 111	2,247	1	34	—
Do.	...	Dolapallehenyaya	...	Bengamuwa	...	18	29	16	2	23	Charles William Sepala Ratnayaka of Bengamuwa
Do.	...	Edandagawahena	...	Pasgoda	...	21	56	4	1	12	1, Muramudalige Don Dines; 2, Muramudalige Don Hendrick of Pasgoda
Do.	...	Polwattehena, &c.	...	do.	...	21	85*a* to 85*e*	25	1	14	1, Siribaddanage Don Hendrick de Silva; 2, Charles William Sepala Ratnayaka, both of Bengamuwa
Do.	...	Kitulpelahena	...	Mologgamuwa	...	19	160	6	1	32	1, Konkaduwege Punchi Appu; 2, Kiramage Ukkuhami, both of Mologgamuwa
Do.	...	Polgahahena	...	do.	...	19	29	61	1	25	—
Do.	...	Galendahena *alias* Ratnayakagehena	...	Parapamulla	...	W.L.O S. No. 86	B	13	0	24	Gammachchari Vitaranage Don Luwis of Parapamulla
Do.	...	Udugangulkele *alias* Kumbalmullehena		Aturaliya	...	4,927	D 560	2	2	26	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent. A. R. P.	Claimants (if any).	Remarks.
February 20, 1903	Wawulgallenahenyaya	Andaluwa		11	62 0 26	1, Vitaranage Edirihami; 2, Kapuge Jayanhami; 3, Rubasinge *Don* Janis; 4, Allahapperuma Vitaranage Don Allis, all of Ehalakanda	—
Do.	Dewalagamagehena	Denagama	3,324	7,716, 7,717	16 0 14	—	—
Do.	Dolehena *alias* Kunuetambehena	Midigama	4,861	J 541	14 2 17	—	—
Do.	Muttettuwiladeniya	Paragala	16½	66	6 2 21	—	—
Do.	Kitulhenyaya	do.	16½	69	182 1 0	—	—
Do.	Ambagahadeniya	do.	16½	67	1 0 22	—	—
Do.	Nakandawilahena	do.	16½	59	4 1 18	—	—
Do.	Bokeraketiyemukalana, &c.	do.	16½	53, 57*a*, 57*b*, 64, 65, 68	1,000 2 38	—	—
Do.	Manandawilamukalana, &c.	Horagala	16	42	353 0 0	—	—
Do.	Bewulehena, &c.	Siyambalagoda	12	118	30 0 36	Jatunda Don Andiris of Siyambalagoda	—
Do.	Helliyadda *alias* Weliliyadda	Mawarala	43	27	0 3 21	—	—
Do.	Dalukgalakele	Ehalape	5,359	11,903, 11,908, 11,909, 11,910, 11,911, 11,912, 11,914, 11,915, 11,919, 11,920, 11,924	16 3 5	—	—
Do.	Dalukgalakele	do.	5,359	11,921, 11,922	6 3 16	—	—
February 27, 1903	Paragahawela, &c.	Kehelwala	32	18, 17	0 3 15	—	—
Do.	Gorakamulledeniya	do.	32	22	4 3 2	—	—
Do.	Galkaduwehena	Waralla	41	31	1 3 0	—	—
Do.	Ihalamuttettugodella	Morawaka	40	119	5 1 25	—	—
Do.	Bowitiyawila	Horagala	16	17	4 3 33	—	—
Do.	Dolapallehenyaya, &c.	do.	16	18, 30, 31	1,061 0 7	—	—
Do.	Atahawledeniya	do.	16	49	3 2 28	—	—
Do.	Beraluwehenyaya, &c.	do.	16	27, 28, 29	828 1 35	—	—
Do.	Kudumirissehena	Pasgoda	21	139	14 3 24	Muramudalige Don Hendrick of Pasgoda	—
Do.	Panakaduwe Ralagehena	do.	21	13	33 0 35	do.	—
Do.	Moratotuahena, &c.	do.	21	143, 144	48 2 22	do.	—
Do.	Uehigahahenakoratuwa	Watukolakanda	5,020	J 568	2 0 38	Hewakankanange Babappu of Watukolakanda	—

February 27, 1903	...	Patinagodahena, &c.	...	Watukolakanda	...	5,020	R 566, T 566	9	3	30	Don Carolis Samarajiwa Siriwardana of Kirinda
March 27, 1903	...	Naranellehena, &c.	...	Kotapola	...	45	48, 490, 492	8	3	16	—
Do.	...	Horehena *alias* Dikhena, &c.	...	do.	...	45	275, 277	43	0	4	—
Do.	...	Hinhavanawilagawahena, &c.	...	do.	...	45	136, 137, 138	12	1	2	—
Do.	...	Gahalakolahenedeniyemukalana, &c.	...	do.	...	45	27, 28	58	1	32	—
Do.	...	Namadaketiyegawahenyaya, &c.	...	do.	...	45	365, 285	22	0	36	—
Do.	...	Gangalangahenyaya	...	do.	...	45	484	14	3	36	—
Do.	...	Batabedda	...	do.	...	45	58	41	1	0	—
Do.	...	Angurumalehena	...	do.	...	45	25	11	0	0	—
Do.	...	Koulamukalana *alias* Naindawamukalana, &c.	...	do.	...	45	12, 13, 14, 15	60	1	17	—
Do.	...	Yahalamullehena *alias* Ganga-addaraokanda, &c.	...	do.	...	45	318, 327, 333, 351, 341, 362, 483, 261	3	2	21	—
Do.	...	Medagodahena	...	Mologgamuwa	...	19	39	5	0	30	1, Surawiragamage Hinappu; 2, Hettiachchige Don Elias; 3, Kiramage Allis; 4, Hettige Balappu, all of Mologgamuwa
April 3, 1903	...	Nawalehenyaya	...	Kotapola	...	45	203	50	0	10	—
Do.	...	Natangigahahena, &c.	...	do.	...	45	50, 52, 53, 54	116	3	5	—
Do.	...	Koskanuwehenedeniya, &c.	...	do.	...	45	222, 223, 224	102	3	17	—
Do.	...	Koulamhenyaya	...	do.	...	45	493	193	3	9	—
Do.	...	Polpetiya, &c.	...	do.	...	45	111	170	2	27	—
Do.	...	Etaheraliyagulana, &c.	...	do.	...	45	485, 487, 488, 489	229	2	12	—
Do.	...	Kerankokudeniya, &c.	...	do.	...	45	107, 110, 494½	9	3	17	—
April 24, 1903	...	Kiriwanegalgodadeniya, &c.	...	do.	...	45	344, 349	154	1	18	—
Do.	...	Angurumelehena, &c.	...	do.	...	45	26, 46, 172, 299, 300	9	0	2	—
Do.	...	Kapuhenamukalana, &c.	...	do.	...	45	249, 250, 252	633	0	25	—
Do.	...	Galwalagawahenyaya, &c.	...	do.	...	45	330, 331	24	2	24	—
Do.	...	Hirannahakawattagawahenyaya	...	do.	...	45	311	8	0	33	—
Do.	...	Angurumelehenamukalana, &c.	...	do.	...	45	17, 18, 19, 20	34	3	21	—
Do.	...	Batabedda	...	do.	...	45	105	42	2	27	—
Do.	...	Kekanadurakele *alias* Arachchigewatta, &c.	...	Kekanadura	...	3,296 3,296 760	7,608½, 7,613¾, Portion of 6,444	4	2	23	—
Do.	...	Kekanadurakele *alias* Puwakgahahena *alias* Ketakalagahawatta	...	do.	...	3,296	7,608½	10	0	18	Vidanage Don Pediris of Kekanadura
Do.	...	Kekanadurakele *alias* Hederegewatta	...	do.	...	3,296	7,613½	2	0	12	Vidanage Carolis Appu of Kekanadura
May 8, 1903	...	Batebedda, &c.	...	do.	...	45	103, 104	32	1	30	—
Do.	...	Bogahadeniyehena, &c.	...	do.	...	45	71, 72	40	0	2	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent. A. R. P.	Claimants (if any).	Remarks.
May 8, 1903	Tennehenamukalana, &c.	Kotapola	45	55, 56	38 3 23	—	—
Do.	Kaluwagahahena, &c.	do.	45	39, 40, 41	39 0 7	—	—
Do.	Kekunagahawalayaya	do.	45	29	35 3 31	—	—
Do.	Gurudiyapatahena *alias* Indigahahena, &c.	do.	45	32, 33, 34	31 1 13	—	—
Do.	Medagoda-atura, &c.	do.	45	78, 79	27 2 35	—	—
Do.	Kosgulanehena, &c.	Mawarala	43	37, 38	13 3 7	1, Hettiachchigamage Don Juanis; 2, Hettiachchige Don Janoris; 3, Hettiachchigamage Don Dines, all of Mawarala	
Do.	Kitulhena	Andaluwa	39	61	67 1 22	1, Don Hendrik Sepala Ratnayaka; 2, Don Davit Sepala Ratnayaka	
May 29, 1903	Wewelwala-atura	Kotapola	45	328	54 0 9	—	—
Do.	Lokuralagedeniyagawahena, &c.	do.	45	134, 135	25 1 8	—	—
Do.	Medagoda	Mawarala	43	34	3 3 17	1, Hettiachchige Don Janoris, 2, Hettiachchikandege Don Appu, both of Mawarala	—
Do.	Galketiyehenyaya	Horagala	16	41	54 0 10	1, Gamachchige Don Bastian; 2, Gamachchige Don Endiris; 3, Gamachchige Don Janis; 4, Alahapperuma Vitaranage Don Allis; and 5, Hewawickramage Don Andiris, all of Waralla	—
Do.	Masmullekele, &c.	Batuwita	4,123 4,120	Portion of 10,700 10,495 10,496 10,497 Portion of 10,499 10,500 10,501	301 3 28	1, Hinipellege Hatana of Batuwita; and 2, Hinipellege Dananchiya of Komangoda	—
June 5, 1903	Paragahahena	Bengamuwa	18	115	2 3 32	Jayalatpatiranage Jayanhami of Bengamuwa	—
Do.	Geeganagehena, &c.	Kirinda	W. L. O. S. No. 111.	1, 2	18 1 0	1, Patanayaka Arachchige Don Andris; and 2, Pallewela Liyanage Dingi Appu, both of Kirinda	—
Do.	Egodawattehena	Kotapola	45	357	20 3 33	—	—
Do.	Tammattanwattehena	do.	45	476	1 0 30	—	—
Do.	Kanateriyanehena *alias* Kudagalahena	do.	45	21	1 3 1	—	—
Do.	Migahahena	do.	45	59	1 2 15	—	—
Do.	Kalugedigahahenemukalana	do.	45	74	1 2 36	—	—
Do.	Korawebewlehena	do.	45	221	2 0 20	—	—
Do.	Polpala *alias* Polgaswattehena	do.	45	109	5 1 7	—	—

June 5, 1903	...	Wattehena	...	Kotapola	...	45	271	5	1	37	—	—
Do.	...	Mahadeniyagawahena	...	do.	...	45	347	10	0	39	—	—
Do.	...	Kahakadadeniyeatmaga	...	do.	...	45	387	5	1	0	—	—
Do.	...	Kekunagaswattehena	...	do.	...	45	126	6	0	5	—	—
Do.	..	Gulanehena, &c.	...	do	...	45	289, 336	494	1	28	—	—
Do.	...	Delgahahena *alias* Delehena	...	Ketanwila		5,359	586	3	3	22	—	—
Do.	...	Gulanewattehena	...	Kotapola	...	45	260	6	0	4	Karanayakage Don David of Bangama	—
Do.	...	Peellehenedeniya, &c.	...	Waralla	...	41	23, 26	46	1	18	—	—
Do.	...	Rukattanahenyaya, &c.	...	do.	...	41	40, 41	214	1	15	1, Gamachchige Don Bastian; 2, Gamachchige Don Endris; 3, Gamachchige Don Janis; 4, Alahapperumavitaranage Don Allis; 5, Hewawikramage Don Endoris, all of Waralla	—
Do.	...	Kandedolehenyaya, &c.	...	do.	...	41	39	173	3	28	do.	—
Do.	...	Goniwalahena	...	do.	...	41	35	8	0	5	1, Gamachchige Don Bastian; 2, Gamachchige Don Endris; 3, Gamachchige Don Janis; 4, Alahapperumavitaranage Don Allis; 5, Hewawikkramage Don Endoris, all of Waralla	—
Do.	...	Koramillagawaokanda	...	Kotapola	...	45	367	4	3	15	—	—
Do.	...	Panichchiyadeniyehena	...	do.	...	45	280	3	1	10	—	—
Do.	...	Medagodahena	...	do.	...	45	477	2	0	26	—	—
Do.	...	Wataraksgodella	...	do.	...	45	294	1	0	14	—	—
Do.	...	Alupodagahahena	...	do.	...	45	337	103	3	29	—	—
Do.	...	Uguduwawehena	...	do.	...	45	481	0	0	16	—	—
Do.	...	Kalukandehena	...	do.	...	45	155	27	3	10	—	—
Do.	...	Uguduwawehena	...	do.	...	45	480	12	3	25	—	—
Do.	...	Magahena	...	do.	...	45	464, 464A	3	0	20	—	—
Do.	...	Muttayewattahena	...	do.	...	45	35	3	2	25	—	—
Do.	...	Bultgahakoratuwa	...	do.	...	45	202	7	1	33	—	—
Do.	...	Gallindahena	...	Bengamuwa	...	18	20	17	0	9	1, Liyanawahunge Jayan; 2, Liyanawahunge Pedirise; 3, Liyanawahunge Wattu; 4, Goipotage Jayan; 5, Goipotage Edire; 6, Samarawiragamage Dineshamy; 7, Koralehewage Mudalihami; and 8, Samarawiragamage Loku Appu, all of Bengamuwa	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent. A. R. P.	Claimants (if any).	Remarks.
July 10, 1903 ...	Pitamagaheneaturuyaya, &c. ...	Ginnaliya ...	22	118, 132, 134, 135, 138, 118¾	158 1 35	1, Liyanage Saron Appuhami; 2, Doraponagamachchige Don Elias; 3, Wickramaarachchipattuwege Puuchi Appu; 4, Lewanage Wattuhami; 5, Liyanage Andrishami; 6, Liyanage Babunhami; and 7, Atandage Don Davit Appuhami, all of Ginnaliya	—
Do. ...	Galkadeokandahena ...	do. ...	22	175	4 2 26	Hendrick Dias Ferdinandis Abegunasekara of Urubokka	—
Do. ...	Dalandakoratuwa, &c. ...	do. ...	22	185, 186, 184	4 1 36	Davit Abewickrama Wijesekara Appuhami of Ginnaliya	—
Do. ...	Gamagehena ...	Beralapanatara ...	33	535	6 2 30	Gamage *alias* Welipotage Mudalihamy of Ketawala.	—
Do. ...	Gulanehena ...	do. ...	33	253	14 3 9	Miellege Sabehami of Beralapanatara	—
Do. ...	Delgahagodahena ...	do. ...	33	626	10 1 30	Migel Perera Mahavidanage Don Dines de Silva	—
Do. ...	Udagangodahena ...	Mawarala ...	43	49	2 0 25	Kandambige Thomas of Mawarala	—
Do. ...	Medagodayaya, &c. ...	Kotapola ...	45	67, 68	109 2 15	—	—
Do. ...	Moragahaketa, &c. ...	do. ...	45	102	118 3 0	—	—
Do. ...	Galgodahenyaya ...	do. ...	45	171	30 2 39	Wanigasekara Wellappulige Babehami of Beralapanatara	—
Do. ...	Nagodahandehena, &c. ...	do.	45	268, 269, 270	53 0 36	Weerakonge Babunappuhami of Kotapola	—
Do. ...	Nedunelangehena, &c. ...	do. ...	45	57, 81, 108, 302	9 3 12	—	—
Do. ...	Tunbewlagawapatahena, &c. ...	do. ...	45	332, 500	62 1 2	—	—
Do. ...	Dikhena, &c. ...	do. ...	45	278, 282	16 1 0	1, Don Andris Ranawaka; 2, Ranawakage Don Davit; 3, Ranawakage Balappu, all of Kotapola	—
Do. ...	Gulanahena *alias* Inaturahena ...	do. ...	45	292	18 3 33	Wanigasekara Wellappulige Babehami of Beralapanatara	—
July 17, 1903 ...	Pahalamahawita ...	Kalubowitiyana ...	49	7	3 3 23	—	—
Do. ...	Minimaruwedeniya, &c. ...	do. ...	—	1, 2, 3, 4, 5, 6, 9, 13, 14, 15, 17, 18, 23, 25, 26, 27, 30, 34 37, 45, 47, 48, 50, 51 56, 58, 59, 60, 61, 64, 65, 66, 67, 69, 70, 71, 72, 73	2,027 1 36	—	—
Do. ...	Ambawilamedagodahena, &c. ...	do. ...	—	62, 63	16 1 28	—	—

July 17, 1903	...	Tuttiripitiyahena	...	Bengamuwa	...	18	91*a*, 91*b*	18	0	6	1; Charles William Sepala Ratnayake; 2, Jayalatpatiranage Don Mathes, both of Bengamuwa	—
Do.	...	Galabindunahena, &c.	...	Beralapanatara	...	33	369, 374, 440, 454, 367	374	2	36	1, Ekanayakage Dineshami; 2, Paranamange Andrishami; 3, Wijesinkankanange Don Charles; and 4, Ekanayakage Davith, all of Beralapanatara	—
Do.	...	Kankunawedeniya, &c.	...	do.	...	33	605, 606, 607, 608, 609, 610, 618, 619, 620, 629	239	2	28	1, Wijesinkankanange Don Charles of Ginnaliya; 2, Amarakonge Andrishami; 3, Amarakonge Wattuhami; 4, Amarakonge Dingi Appu; 5, Amarakonge Ranhami; 6, Amarakonge Nicholashami; 7, Jayasuriyage Simanhami; 8, Amarakonge Dingi Appu; 9, Amarakonge Ukkuhami; all of Beralapanatara; and 10, Amarakonge Sinni Appu of Kiripitiya	—
Do.	...	Wassagethotuwehena	...	do.	...	33	118	3	0	35	Gamachcharige Don Carolis of Beralapanatara	—
Do.	...	Pitadeniyehena	...	do.	...	33	505	29	3	19	1, Welipotage Ukkuhami; 2, Gamage *alias* Welipotage Mudalihami, both of Ketawala	—
Do.	...	Etakalanhena	...	Pasgoda	...	21	14A	14	3	24	Balasurige Don Janis of Pasgoda	—
Do.	...	Ududeniyahena, &c.	...	Beralapanatara	...	33	522, 523, 524	89	1	19	Haputantirige Lokuappu of Ketawala	—
Do.	...	Diyapillehena, &c.	...	Bengamuwa	...	18	28, 34, 37	51	3	23	1, Samarawiragamage Lokuappu: 2, Ganhewage Babeappu. both of Bengamuwa	—
Do.	...	Gedarawiladeniya, &c.	...	Panakaduwa	...	17	9, 27, 33, 34	271	1	18	1, Hettiachchige Matheshami of Talapalakanda; 2, Jasinkandege Don Tomis of Rotumba, 3, Gamage Don Davit of Panakaduwa; 4, Gamage Don Siyadoris of Panakaduwa; and 5, Egodahewage Babahami of Panakaduwa	—
July 24, 1903	...	Pitadeniyehena, &c.	...	Andaluwa	...	39	20, 20¾	111	3	10	1, Allaperuma Vitaranage Don Allis; 2, Vitaranage Edirihami both of Andaluwa; 3, Kapuge Jayanhami of Ehalakanda; 4, Rubasinge Don Janis of Andaluwa; and 5, Don Samel Sepala Ratnayaka of Rotumba	—
Do.	...	Nugahahena, &c.	...	do.	...	39	1, 30, 24	46	2	9	1, Rubasinge Don Bastian; 2, Rubasinge Dingi Appu, both of Andaluwa	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent. A. R. P.	Claimants (if any).	Remarks.
July 24, 1903	Polgahahena, &c.	Ehalakanda	37	1, 2, 3, 5, 7, 11, 12, 15, 1¼	110 0 32	1, Kapuge Jayanhami; 2, Kapuge Andrishami; 3, Kandambige Appu, and 4, Kandege Sidanhami, all of Ehalakanda	—
Do.	Do.	Mologgamuwa	19	53, 53¼	100 0 10	1, Kiramage Davit; 2, Surawiragamage Heenappu; 3, Kirigamage Dinese; 4, Hettige Dowan; 5, Kiramage Ennappu; 6, Hettiachchige Don Eliyas; 7, Kiramage Ukkuhami; 8, Kotapolahettige Luwishami; 9, Hewavitaranage Dingiappu, all of Mologgamuwa; 10, Don Domingo de Silva Jayatilaka Gunawardana, Muhandiram, of Hikkaduwa; 11, Manikkubadaturuge Bastian de Silva of Ahangama; 12, Sembukuttige Karolis de Silva of Hikkaduwa; 13, Kiramage Andrishami of Mologgamuwa; 14, Kiramage Allis Appu of Mologgamuwa; 15, Hettige Balappu of Mologgamuwa	—
July 7, 1903	Yakadagalpolahenyaya	Ginnaliya	22	46	38 2 0	1, Jagodage Hinduhami; 2, Jagodage Dasanhami; 3, Jagodage Dineshami; 4, Jagodage Simanhami, all of Ginnaliya	—
August 7, 1903	Badupolagawadanlanda	do.	22	183	14 0 27	1, Nawaratna Radage Babe; 2, Manage Migelhami; 3, Munasin Arachchige Andrayas, all of Ginnaliya; 4, Charles Alexander Palihawadana of Urubokka	—
Do.	Nambiyabaulehena	Andaluwa	39	10	4 2 0	1, Allaperuma Vitaranage Don Allis; 2, Vitaranage Sidun, both of Andaluwa	—
Do.	Hikgahahena	Banagala	26	79	3 2 3	Vidanagamachchige Don Mathes of Banagala	—
Do.	Mahaminiyawilegodella	Morawaka	40	121	2 2 30	1, Hakurage Babuna; 2, Hakurage Babandrisa, both of Morawaka	—
August 21, 1903	Tammattanhena	Kotapola	45	475	3 0 34	—	—
Do.	Galpottehena	Botumba	44	225	1 1 18	—	—

August 21, 1903	...	Indigalgodamukalana	...	Rotumba	...	44	3	19	2	6	—	—
Do.	...	Minuwanwilahena	...	do.	...	44	144	12	0	30	—	—
September 4, 1903	...	Mahakumburawilatiyambarahena, &c.	...	do.	...	44	112, 118, 121	5	3	5	—	—
September 18, 1903	...	Wambotuhenedeniya, &c.	...	do.	...	44	83, 85	87	2	5	—	—
September 25, 1903	...	Liyangahahenyaya	...	Dampahala	...	20	65A	50	0	0	1, Galanage Loku Appu; 2, Galanage Jayan; 3, Galanage Luse; 4, Galanege Dingi Appu; 5, Galanage Dingi Appuhami; and 6, Alutge Don Dines Appuhamy, all of Dampahala	—
Do.	...	Nikadaulatennehena	...	do.	...	20	9	6	0	8	1, Alutge Don Dines; 2, Alutge Carolis; 3, Abeywardana Don Marthinus; 4, Wannige Davit; 5, Samarasinghe Matheshami; 6, Siriwardana Liyanage Andiris; 7, Wannige Wattuhami; and 8, Samarasinha Don Bastian, all of Dampahala	—
Do.	...	Madolwitiyalehena, &c.	...	Pasgoda	...	21	112, 114	9	1	2	1, Muramudalige Don Hendrick; 2, Siribaddanage Hinniappu; and 3, Siribaddanage Don Hendrick, all of Pasgoda	—
Do.	...	Madolwitiyalehena	...	do.	...	21	111	3	0	8	do.	—
	...	Peellehena *alias* Galkaduwahena	...	Wāralla	...	41	27	8	2	18	1, Gamachchige Don Bastian; 2, Gamachchige Don Endris; 3, Gamachchige Don Janis; 4, Alahapperumavitaranage Don Allis; 5, Hewawickramage Don Endoris; 6, Liyanage Don Thomas Abeygunawardana; 7, Gamachchige Don Andiris, and 8, Amarasinha Babunhami, all of Waralla	—
Do.	...	Kewunkehena	...	Pasgoda	...	21	142	25	1	5	1, Puramudalige Don Dines; 2, Muramudalige Don Hendrick, both of Pasgoda	—
October 9, 1903	...	Mahakumburehena, &c.	...	Panakaduwa	...	17	18, 8, 41	17	1	35	1, Panakaduwehettiachchige Mateshami; 2, Jasinkandage Don Thomis; 3, Panakaduwegamage Don Davith; 4, Panakaduwegamage Don Siadoris; 5, Egodahewage Babahami	—
Do.	...	Medatuduwa	...	Pasgoda	...	21	87	3	1	16	Muramudalige Don Hendrick of Pasgoda	—
November 6, 1903	...	Uguduwawehena	...	Horagala	...	16	6	7	1	0	Horagalagamage Andiris of Horagala	—
Do.	...	Jambugahahena	...	Kotapola	...	45	499	217	0	16	Don Tiadoris Henry Abewickrama of Kotapola	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent. A. R. P.	Claimants (if any).	Remarks.
November 6, 1903 ...	Kuruduwattehenyaya ...	Kotapola ...	45	494	544 3 28	Don Tiadoris Henry Abewickrama of Kotapola	—
Do. ...	Medagoda ...	Rotumba ...	44	224	7 2 0	Warnakulage Odris of Rotumba	—
Do. ...	Boraluketiyehena ...	Mawarala ...	43	102, 103	2 0 2	1, Hettiarachchige Don Janoris; and 2, Hettiarachchige Samel Appu, both of Mawarala	—
November 13, 1903 ...	Galpottehena ...	Rotumba ...	44	7	3 3 30	Singarakkarage Liyana Ratnaya of Rotumba	—
Do. ...	Palagalahena ...	Banagala ...	26	5*c*	7 2 22	Senanayakagamage Don Juwanis of Banagala	—
Do. ...	Bambarawelketiyedeniya, &c. ...	do. ...	26	4, 5, 41, 55, 61, 64, 70, 74, 74*a*, 74*b*, 74*c*, 94, 97, 98, 99, 108, 110, 121, 125, 127, 128, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143	1,335 1 15	—	—
Do. ...	Kunukosgahagulanehenyaya ...	Kotapola ...	45	496	105 1 31	Don Tiadoris Henry Abewickrama of Kotapola	—
Do. ...	Dotalugalahena, &c. ...	do. ...	45	1, 6	74 2 32	1, Don Andris Ranawaka; 2, Ranawakage Don Davit; 3, Ranawakage Balappu, all of Talapalakanda of the Kotapola division	—
Do. ...	Sapugahahenyaya ...	do. ...	45	495	447 2 6	Don Tiadoris Henry Abewickrama of Kotapola	—
Do. ...	Kudaludeniyahenyaya ...	Waralla ...	41	1	490 0 16	1, Gamachchige Don Andris; 2, Gamachchige Babehami; 3, Gamachchige Don Bastian; 4, Amarasingha Baba; 5, Gamachchige Don Endoris; 6, Gamachchige Don Sinnoappu; 7, Liyanage Charles; 8, Hewawickramage Don Endoris; 9, Alahaperuma Vitaranage Don Allis Appu; 10, Gamage Heen Appu; 11, Hendrick Abraham Disanayaka of Welikada in Colombo; 12, Gamachchige Andrishami of Waralla	—

November 13, 1903	...	Diyahitinawaladeniya	...	Rotumba	...	44	99	4	2	27	1, Jasinkandage Dingi Appu; 2, Ratnayaka Sepala Don, Hendrick, both of Rotumba
December 4, 1903	...	Yhololketiyahena	...	Pasgoda	...	21	10½	18	1	2	Balasurige Don Janis of Pasgoda
Do.	...	Kaluwagahahena, &c.	...	Ehelakanda	...	37	19, 21, 19*a*, 19*b*	30	0	27	Wickramakalutotage Edonis Appu of Karawe
December 11, 1903	...	Ketiwila	...	Kanahalagama	...	75	69	16	2	20	—
Do.	...	Kanahalagamamukalana	...	do.	...	75	56	8	1	10	—
Do.	...	Buhorekuttiya, &c.	...	Beragammulla	...	56	1, 2	80	1	3½	—
Do.	...	Tennehena, &c.	...	Bamunumulla	...	85	4	28	1	15	—
Do.	...	Wemulla-addarahena	...	Diviture	...	58	5	2	0	19½	—
Do.	...	Deiyandaramukalana	...	Deiyandara	...	84	6	21	1	28	—
Do.	...	Kankanamageaturahena, &c.	...	Diviture	...	58	22, 28, 33, 36, 45	59	1	23½	—
Do.	...	Nawalahena	...	Banagala	...	26	43	2	1	25	Hewatennage Dowan of Banagala
Do.	...	Potta-addarahena, &c.	...	Diviture	...	58	4	54	2	38	—
Do.	...	Haliyawileudumulla, &c.	...	do.	...	58	39, 46, 48, 49	84	3	36	—
Do.	...	Pita-addarahena	...	Rotumba	...	44	64	0	3	12	Jansin Kandege Ranhami of Rotumba
Do.	...	Panuwalahena	...	Diviture	...	58	30	4	1	0½	—
Do.	...	Heennarangahakoratuwa	...	Mawarala	...	43	33	1	0	15	(1) Hettiachchigamage Don Dissan; 2, Hettiachchigamage Don Dines, both of Mawarala
Do.	...	Udadepalagodahena	...	Parapamulla	...	W. L. O. S. No. 93 S.P.	A, B, C.	3	3	38	—
Do.	...	Divimakulugodahena	...	Diviture	...	58	1, 6	15	1	7	—
Do.	...	Kalugahahena, &c.	...	Panditaporuwa	...	83	24, 13, 14	12	3	1	—
December 18, 1903	...	Galagahawawiledeniya, &c.	...	Kanahalagama	...	75	14, 15, 16, 18, 52, 70, 75, 79, 13, 17, 56*a*, 56*b*, 56*c*, 80	83	1	0	—
Do.	...	Hatamunahena, &c.	...	do.	...	75	24	128	0	13	—
Do.	...	Sapugahawattehena	...	Urumutta	...	68	33	8	2	12	—
Do.	...	Elledolahena	...	Dematapassa	...	59	21	6	1	30	—
Do.	...	Godawilehena, &c.	...	Howpe	...	73	5, 79	11	2	14	—
Do.	...	Ketiwiladuwa, &c.	...	Wilpita	...	87	3, 1, 2, 14, 15, 16, 18, 23, 24, 65	26	0	31	—
Do.	...	Dandiyahena *alias* Muttettuhena, &c.	...	Welihena	...	67	21*b*	366	1	23	—
Do.	...	Godagawahena	...	Balukawala	...	77	22	3	0	0	—
Do.	...	Kabaragoitennahena	...	Dematapassa	...	59	35	3	2	30	—
Do.	...	Ihalaminikawedeniya	...	do.	...	59	50	6	3	7	—
Do.	...	Egodahena	...	Urumutta	...	68	40	3	3	34	—
Do.	...	Paranawattehena	...	do.	...	68		16	3	4	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation	No. of Plan.	No. of Lot.	Extent.	Claimants (if any).	Remarks.
					A. R. P.		
December 18, 1903 ...	Dodangastennehena ...	Rotumba ...	44	119	12 3 23	1, Kandege Dassanhami; 2, Kandege Dantu Appu; 3, Kandege Babunhami; 4, Kandege Andrishami; 5, Kandege Jayatuhami, all of Rotumba; 6, Kandambige Ederehami of Ehalakanda; 7, Kapuge Adiriyanappu; 8, Jasinkandege Adiriyappu; 9, Jasinkandege Siyadoris; 10, Jasinkandege Balappu; 11, Jasinhandege Yamaris; 12, Jasinkandege Allis; 13, Jasinkandege Don Andris Appu; 14, Jayasinkandege Dingi Appu, all of Rotumba; 15, Kandege Sedanhami; 16, Kandege Thomishami, both of Rotumba	—
December 23, 1903 ...	Wattegearambehenyaya ...	Hinipella ...	80	12	8 1 10	—	—
Do. ...	Doladegodahena *alias* Lokadahena ...	Rotumba ...	44	102, 103	33 2 10	(1) Kandege Dasanhami; 2, Kandege Dinheappu; 3, Kandege Babunhami; 4, Kandege Andrishami; 5, Kandege Jayatuhami, all of Rotumba; 6, Kandambige Ederihami of Ehalakanda; 7, Kandege Sedanhami; 8, Kandege Thomishami; 9, Kapuge Adiriyan Appu; 10, Jasinkandege Adiriyan Appu; 11, Jasinkandege Siyadoris; 12, Jasinkandege Balappu, 13, Jasinkandege Yarmaris, all of Rotumba	—
Do. ...	Galagawahena, &c. ...	Dematapassa ...	59	1, 10	364 0 6½	—	—
Do. ...	Kabaragoitennehena ...	do. ...	59	11	13 0 21	—	—
Do. ...	Potuwiladeniya, &c. ...	Urumutta ...	68	68, 82, 105, 109, 110, 114, 115, 117, 123, 132, 133	851 1 33	—	—
Do. ...	Beliketiyekumkuredeniya, &c. ...	Talahagama ...	86	50, 62	505 0 16	—	—
Do. ...	Dekettewehena, &c. ...	do. ...	86	21, 28, 19, 20	32 2 11	—	—
Do. ...	Uruwalahena, &c. ...	do. ...	86	1, 6, 25	68 3 18	—	—
Do. ...	Talahagamamukalana ...	do. ...	86	77	126 3 29	—	—
Do. ...	Lenamagodahena, &c. ...	Howpe ...	73	29, 31	16 2 12	—	—

December 31, 1903	...	Okandehena	...	Ehalakanda	...	37	13, 14, 38, 23, 27, 37	133	3	6	1, Kandambige Dingi Appu of Ehalakanda; 2, Kandambige Appu of Ehalakanda; 3, Kandambige Dantuhami of Ehalakanda; 4, Kandambige Edirihami of Ehalakanda; 5, Kodippilige Appu of Ehalakanda; 6, Alahupperuma Vitaranage Appu of Ehalakanda; 7, Kandambige Edirihami of Kirama; 8, Kandambige Don Dénis of Kirama; 9, Kandambige Adrian of Ehalakanda; 10, Alahapperuma Vitaranage Allis of Ehalakanda; 11, Kandambige Lokuappu of Ehalakanda; 12, Kudupillege Babunappu of Ehalakanda; 13, Jasinkandege Pehami of Mawarala; 14, Kapuge Jayanhami of Ehalakanda; 15, Kandege Siddanhami of Ehalakanda	—	—
Do.	...	Talagaswilahena, &c.	...	Wenagama	...	69	1, 21*a*, 31, 22, 4	206	2	19	—	—
Do.	...	Udakerawekuttiya	...	Welihena	...	67	45	38	0	0	—	—
Do.	...	Kahawinnehena	...	Rotumba	...	44	131	7	3	0	1, Jasinkandege Don Tomis of Rotumba; 2, Mailamperumage Punchi Babahami of Urawa; 3, Jasinkandege Adrian Appu of Rotumba; 4, Singappulige Don Andris of Rotumba; 5, Mailanperumage Anohami of Rotumba; (6) Singappuliliyanage Nikulas of Ratumba; 7, Singappuliliyanage Don Davit of Kandamaditta; 8, Singappuliliyanage Babahami of Rotumba; 9, Singapulliliyanage Hinhami of Siyambalagoda	—	—
Do.	...	Lenamagodahena	...	Howpe	...	73	28	1	3	9	—	—
								23836	3	20½		
Hambantota District.												
April 24, 1903	...	Komehena	...	Bedigama	...	4,220	I 473	9	3	5	1, Jayawickrema Arachchige Jotihami; 2, Wickremasuriya-arachchige Don Andris	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent. A. R. P.	Claimants (if any).	Remarks.
May 8, 1903	Kongahahena	Ambalantota	5,851	14.401	2 1 28	—	—
July 3, 1903	Bebila-attagodamukalana	Kudahilla-ambala	5,198	11,162	48 0 25	—	—
Do.	Pattiyeweleralagehena	Kudahilla	5,198	V 577	3 0 18	—	—
August 7, 1903	Nugehena, &c.	Pallattara	5,557	H 527 J 527	5 3 18	—	—
September 18, 1903	Horaketiyehena	Warapitiya	52	18	14 2 32	—	—
Do.	Mimulagawahena	do.	52	56	0 3 38	—	—
September 25, 1903	Ambalamehena *alias* Nawalehena	do.	52	40	1 3 10	—	—
Do.	Nawalehena	do.	52	27	32 3 11	—	—
Do.	Paluwattehena	do.	52	34	4 0 32	—	—
Do.	Alukomehena	do.	52	33	3 1 37	—	—
Do.	Rammalekanda	Saputantirikanda	51	1	548 3 16	—	—
Do.	Talgahagawahena, &c.	Warapitiya	52	42	69 1 35	—	—
October 9, 1903	Mirijjawalakeleyaya, &c	Mirijjawala	54	1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18	1,026 1 30	—	—
Do.	Lolugasdiganakela, &c.	Arabokka	53	1, 2, 3, 4, 5, 7, 15, 16, 17, 18, 19, 20, 22, 23, 24, 25, 6	3,856 1 17	—	—
Do.	Kebellaketiyehena *alias* Nawalehena	Warapitiya	52	31	8 0 15	—	—
Do.	Sadrishamigewatta, &c.	Wanduruppa	62	4	1 1 0	—	—
Do.	Guwewedeniya	do.	62	19	4 2 30	—	—
Do.	Sandbank and Seashore	Diyagasgoda	64	31, 34	23 1 0	—	—
Do.	Payibokkewatta	Payibokka	65	15	4 0 5	—	—
Do.	Sittrakalakele, &c.	Sittrakala	66	1, 2, 3, 4, 6, 7, 8, 9, 10	737 0 32	—	—
Do.	Lolugahahena	Pallattara	5,557	J 526	1 1 14	—	—
Do.	Guwewedeniya, &c.	Wanduruppa	62	18, 16	4 2 18	—	—
Do.	Sittrakalawatta	Sittrakala	66	5*e*	10 2 20	—	—
Do.	Kukulkatuwawella-addarakiralamendiya, &c.	Diyagasgoda	64	1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 13, 14, 17, 18, 19, 21, 22, 25, 27, 28, 33	138 3 10	—	—
October 30, 1903	Arabokkewelhenyaya, &c.	Arabokka	53	9, 12	16 3 12	—	—
November 13, 1903	Kebilitigoda, &c.	Payibokka	65	4, 7, 8, 9, 10, 18, 19, 20, 21, 22, 25, 13, 14, 23	406 3 25	—	—
December 4, 1903	Gingalarahena	Godawela	5,278	S 581	1 1 17	Edirisurige Dineshami of Godawela	—

December 4, 1903	...	Waldehimandiyahena *alias* Puswelamandiyahena, &c.	...	Godawela	...	5,278	Q 581, R 581	5 3 18	Panamulla Arachchige Allis Appu of Godawela	—
December 11, 1903	...	Berawayagewatta, &c.	...	Diyagasgoda	...	64	29, 30, 32	119 1 35	1, Abdulla Abdul Carim of Hambantota; 2, Wijeratnagamage Don Allis; 3, Medagamage Subaya; 4, Medagamage Sawwa; and 5, Medagamage Bayiya, all of Medagama	—
Do.	...	Mahagalalangahena	...	Warapitiya	...	52	68	1 2 31	Agampodige Pedrisa of Warapitiya	—
Do.	...	Kirimetithippolahenyaya, &c.	...	do.	...	52	41, 46	4 0 10	—	—
Do.	...	Galagawawatta, &c.	...	Medagama	...	63	33, 34, 35	10 0 27	1, Don Hendrick Seneviratna; and 2, Sabapati Ranhoti Ridiyagama Gamage Dontu Gamaya, both of Medagama	—
Do.	...	Medagamakela, &c.	...	do.	...	63	1, 4, 5, 6, 13, 14, 15, 16, 17, 18, 19	402 2 25	1, Don Hendrick Seneviratna; and 2, Sabapati Ranhoti Ridiyagama Gamage Dontu Gamaya, both of Medagama	—
December 18, 1903	...	Ihalawattahena, &c.	...	Warapitiya	...	52	50, 51	41 0 2	Agampodige Heen Babuna of Warapitiya	—
Do.	...	Pallattaragehena *alias* Migashena	...	do.	...	52	5	3 0 24	Agampodi Liyanadurage Rodda of Warapitiya	—
Do.	...	Ensalwila	...	Saputantirikanda	...	51	2	0 1 12	—	—
								7,575 3 14		
EASTERN PROVINCE. Nil.										
NORTH-WESTERN PROVINCE. Nil.										
NORTH-CENTRAL PROVINCE.										
July 25, 1903	...	Kudawananmaduwamukalana	...	Kudawannanmaduwa	...	23	1	119 3 15	—	—
Do.	...	Kudawananmaduwapokuna	...	do.	...	23	2	4 3 23	—	—
Do.	...	Kudawananmaduwahena	...	do.	...	23	3	63 0 30	—	—
Do.	...	Wannanmaduwa, Godaelagawamukalana	...	Mahawannanmaduwa	...	15	1	9 0 17	—	—
Do.	...	Mahawannanmaduwelanda	...	do.	...	15	2	48 1 0	—	—
Do.	...	Mahawannanmaduwamukalana	...	do.	...	15	3	252 2 7	—	—
August 21, 1903	...	Tammannewelanda	...	Tammannewa	...	21	1	12 2 32	—	—
Do.	...	Tammannewemukalana	...	do.	...	21	2	82 3 9	—	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent.	Claimants (if any).	Remarks.
					A. R. P.		
August 21, 1903	Hammillewamukalana	Hammillewa	14	1	229 3 14	—	—
Do.	Hammillewahena	do.	14	2	9 3 12	—	—
Do.	Tariyankulamakerukoppuwa	do.	14	3	0 0 28	—	—
Do.	Welanpathahenmukalana, Weuwana-mukalana, and Oyabadamukalana	Yahalagama	17	1	1,124 2 26	—	—
Do.	Yahalagamawewa	do.	17	2	10 2 14	—	—
Do.	Kurunegalamukalana, Wewapahala-mukalana, and Oyabodamukalana	Ihalawewa	18	1	425 3 22	—	—
Do.	Kongahalanda, Palugahalanda, and Udumbugalalanda	do.	18	2	220 1 16	—	—
Do.	Ihalawewa	do.	18	3	6 1 30	—	—
July 25, 1903	Mahanelunkulamamukalana	Mahanelunkulama	19	1	108 0 28	—	—
September 13, 1903	Tariyankulamemnkalana	Tariyankulama	22	1	126 2 12	—	—
Do.	Karakoppuwagawahena	do.	22	2	18 3 10	—	—
Do.	Ganpareihalahena	do.	22	3	97 2 28	—	—
Do.	Ganpareihalamukalana	do.	22	4	25 2 12	—	—
Do.	Ganpareipaunlahena	do.	22	5	27 1 12	—	—
Do.	Gamihalamukalana	do.	22	6	152 0 2	—	—
Do.	Wewaihalahena	do.	22	7	16 2 14	—	—
Do.	Tariyankulamawewa	do.	22	8	32 3 3	—	—
Do.	Siyambalagahawatta	do.	22	9	1 1 34	—	—
Do.	Siyambalagahawatta Pawulalanda	do.	22	10	17 3 14	—	—
Do.	Kumburapawulahena	do.	22	12	0 0 25	—	—
Do.	Tariyankulamepaluwatta	do.	22	15	4 3 29	—	—
Do.	Weeragahahena or Wowanehena	do.	22	16	21 2 22	—	—
Do.	Henapawulamukalana	do.	22	17	1 0 30	—	—
Do.	Tariyankulamewelbima	do.	22	18	21 1 10	—	—
November 29, 1903	Sattambakulamukalana	Sattambakulama	30	1	315 2 12	—	—
					3,610 2 35		

PROVINCE OF UVA.										
January 30, 1903	...	Minuwanulpotehena *alias* Batihankotuwa	Katugaha	...	32	9	2 0 37	—	—	—
February 6, 1903	...	Usgoda *alias* Usgodapatana	do.	...	32	20	114 2 30	—	—	—
Do.	...	Bombugolla *alias* Bombugollapatana	do.	...	32	16	3 2 0	—	—	—
February 20, 1903	...	Galbendigodahena *alias* Lindagawawattehena, &c.	do.	...	32	12, 13	20 2 24	1, Minuwanulpotegedara Kuma; 2, Minuwanulpotegedara Punchirala; 3, Minuwanulpotegedara Siribadde; and 4, Minuwanulpotegedara Ukku Menika, all of Katugaha	—	—
March 27, 1903	...	Bogahahena, &c.	Ellewela	...	15	15, 12, 10, 14	10 0 8	—	—	—
Do.	...	Habaktennepatana, &c.	do.	...	15	17, 7, 39, 40	271 3 30	—	—	—
Do.	...	Kirimetiellehena, &c.	Katugaha	...	32	1, 3	8 3 35	—	—	—
Do.	...	Wattegodapatana	do.	...	32	7*a*	1 0 0	—	—	—
April 3, 1903	...	Galabodaellepatana	Kurukude	...	14	2	0 3 12	—	—	—
April 24, 1903	...	Gamagedarahena	Katugaha	...	32	24*a*	2 0 0	1, Gamagedara Nawaratna Mudiyanselage Kiri Banda Gamarala; 2, Gamagedara Ukku Menika; 3, Gamagedara Hudu Menika; and 4, Gamagedara Appuhami	—	—
May 8, 1903	...	Batawelapatana, &c.	Perahetiya	...	30	27, 29, 83, 81	9 2 26	—	—	—
Do.	...	Galgodahenapatana, &c.	do.	...	30	13, 13*a*, 23, 65, 48, 49, 53, 74, 75, 76, 79, 80, 109	862 0 15	—	—	—
Do.	...	Embulambehena, &c.	do.	...	30	91, 118	12 0 18	—	—	—
Do.	...	Otalapatana, &c.	do.	...	30	115, 116, 119	50 2 24	—	—	—
Do.	...	Balitiyannawala, &c.	Pattiyagedara	...	31	9*a*, 16, 24, 26, 29, 34, 36, 37, 39, 43, 44, 59, 45, 58, 60, 61, 63, 64, 66, 69, 89, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 53, 54, 55, and 1	1,556 0 25	—	—	—
May 29, 1903	...	Udakumburehena, &c.	Hinnarangolla	...	16	14, 16, 17, 24, 25, 28	148 3 32	—	—	—
Do.	...	Bokotuwakumbura-aswanata	Kurukude	...	14	58	0 2 20	—	—	—
Do.	...	Galabodaellepatana	do.	...	14	1	26 0 15	—	—	—
Do.	...	Hlukwattegodahena, &c.	Pattiyagedara	...	31	40, 42, 57, 76	13 1 31	Mutu Banda Katugaha, Registrar of Katugaha	—	—
June 5, 1903	...	Maha-arawehena	Kurukude	...	14	26	4 3 13	Imbulketiyawe Appu	—	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent. A. R. P.	Claimants (if any).	Remarks.
June 5, 1903	Wetalawehena	Kurukude	14	20	5 1 35	1, Bogetegedara Kiriwante; and 2, Soronatota Weliarawegedara Kiriwante	—
Do.	Nabokkehena	Ellewela	15	37	6 3 5	1, Pambegedara Kuma; 2, Pambegedara Appuhami; 3, Pambegedara Don Odiris Appuhami; and 4, Pambegedara Siyatu, all of Ellewela	—
Do.	Egoda-arawehena, &c.	do.	15	32*a*, 22*b*	8 2 0	1, Ettalagedera Mutu Menika; 2, Ettalagedara Badderala Arachchi; 3, Ettalagedara Kiri Banda; 4, Ettalagedara Punchirala; 5, Ettalagedara Ganetirala; 6, Ettalegedara Siribaddena; 7, Ettalegedara Kiriwante; 8, Ettalagedara Ukku Banda; and 9, Ettalagedara Hin Menika, all of Ellewela	—
Do.	Ampitigodapatana	do.	15	26	2 3 12	Pallekumburegedara Mutu Menika	—
Do.	Aluttennehena *alias* Nayagodahenyaya, &c.	do.	15	18, 19, 20, 23, 25	130 0 2	—	—
Do.	Dandupolaellepatana, &c.	Wellewela	18	12, 13, 4, 5, 8	33 1 26	Wellewela Siribaddena	—
Do.	Bokkearawehena	Hinnarangolla	16	Z 2	0 3 0	—	—
Do.	Galearawehena, &c.	Wellewela	18	12*a*, 14*a*	3 1 30	Wijayaratna Rajakaruna Wahala Mudiyanselage Punchi Banda, Basnayaka Nilame of Dambawinne	—
Do.	Asweddumagodapatana	Perahettiya	30	34	6 0 2	Ensalbeddegedara Appuhami of Perahettiyagama	—
Do.	Kalukitulaulpota, &c.	do.	30	58, 59	2 3 37	—	—
July 3, 1903	Mulattuhena *alias* Uda-arawegodapatana, &c.	do.	30	57, 66	2 0 35	—	—
Do.	Usgoda, &c.	Katugaha	32	18, 19*a*	4 0 15	1, M. B. Katugaha, Registrar; 2, T. B. Katugaha, *ex* Ratemahatmaya; 3, Nawaratna Mudiyanselage Kiri Banda	—
Do.	Batawelahena	do.	—	19*c*	4 2 1	1, M. B. Katugaha, Registrar; 2, T. B. Katugaha, *ex* Ratemahatmaya	—
July 17, 1903	Ambewelagodapatana, &c.	Moratota	28	164, 165, 34 32, 5	35 3 36	—	—
Do.	Kuda-arawemukalana	do.	28	72	5 1 8	—	—
Do.	Godawattehena, &c.	Perahettiya	30	4, 5	7 1 16	—	—
Do.	Batawelahena	do.	30	26	8 3 25	—	—
Do.	Edandagawahena	Wellewela	18	9	3 3 4	—	—

July 17, 1903	...	Pallearawepatana, &c.	...	Perahettiya	...	30	41, 62	1 1 12	—	—
Do.	...	Otalapatana, &c.	...	do.	...	30	112, 113, 88	4 3 28	—	—
Do.	...	Pallearaweaswanata	...	Moretota	...	28	3	0 1 0	—	—
Do.	...	Kitulgasmulletennepatana	..	Kurukude	...	14	53	0 3 24	—	—
July 24, 1903	...	Pinarawehena	...	Hinnarangolla	...	16	0 2	9 0 0	Laduwahettige Don Hendrick Appu of Bentota	—
Do.	...	Oyadiga-arawepatana, &c.	...	Pattiyagedara	...	31	22, 19, 20, 21, 23	32 1 38	—	—
Do.	...	Deiyannearawegoda	...	Perahettiya	...	30	24	1 1 18	Kahatagahagodagedara Menika	—
Do.	...	Wattuvelpotapatana, &c.	...	do.	...	30	46, 44, 45	2 1 23	—	—
Do.	...	Wewehena *alias* Dansaltennepatanna	...	do.	...	30	78	3 1 0	Amunumulle Jasin Mudiyanselage Sudu Banda, Trustee of Bogoda Vihare	—
Do.	...	Puranpambehena, &c.	...	do.	...	30	111, 73, 33	6 1 3	—	—
Do.	...	Asweddumegodahena	...	do.	...	30	36	0 3 7	Ensalbedde Hami	—
Do.	...	Perahettiyehena	...	do.	...	30	102	2 1 30	—	—
Do.	...	Palugedarawattehena	...	Moretota	...	28	110	2 0 25	Bokutuwewattegedara Vidane of Moretota	—
Do.	...	Pattiyagedarahena	...	do.	...	28	47	1 0 21	—	—
Do.	...	Galgodapatana *alias* Gasgollapatana	...	Idamegama	...	17	22	5 0 20	Gasgollegedara Appuhami of Meda-arawegama	—
July 31, 1903	...	Watabeddearawehena	...	do.	...	17	29	0 1 0	—	—
July 24, 1903	...	Metiwalapeliyahena *alias* Hapugahagodapatana	...	do.	...	17	F 4	1 0 36	—	—
Do.	...	Galkandapatana	...	do.	...	17	21	1 2 34	—	—
Do.	...	Huriyaellehena	...	do.	...	17	41	2 0 15	—	—
Do.	...	Ampitiwagurehena	...	do.	...	17	R 4	3 0 20	Polgahawattegedara Kawrala of Meda-arawegama	—
Do.	...	Diyaunnawepatana, &c.	...	do.	...	17	33*a*, 39, 36, 37	3 0 21	—	—
August 7, 1903	...	Dunugekele	...	Ellewela	...	15	8	6 3 16	Ambagahawalagedara Siribadde of Ellewela	—
Do.	...	Yahalabedde-Girambekandepatana *alias* Nugagahatennepatana	...	Hinnarangolla	...	16	19, 20, W 2½	89 2 0	—	—
Do.	...	Huriyaellapatana	...	Kurukude	...	14	4	1 2 0	—	—
Do.	...	Perahettiye Idamegedarahena *alias* Udaulpotepatana	...	Perahettiya	...	30	60	3 3 7	1, Idamegedera Appuhamy and Ukku Banda Gamarala, both of Perahettiya	—
Do.	...	Paradehiarawehena	...	do.	...	30	12*a*	0 2 14	Kirinde Idamegedara Ukku Menika	—
Do.	...	Panwewapatana	...	do.	...	30	50	6 3 24	—	—
Do.	...	Huriyahelapatana, &c.	...	Moretota	...	28	4*a*, 82, 85, 97, 98, 99, 103, 108, 116, 117, 118, 120, 124, 125, 126, 129, 130, 135, 136, 137, 138, 139, 140, 142	597 3 12	—	—
Do.	...	Huriyahelapatana, &c.	...	do.	...	28	4, 51, 52, 54, 55, 56, 57	386 3 27	—	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent.	Claimants (if any).	Remarks.
					A. R. P.		
August 7, 1903	Kurundugasulpotegommana, &c.	Moretota	28	77, 78, 79, 80	7 3 14	—	—
Do.	Mahabedde, &c.	Halpe	36	31, 32, 33, 99	650 2 1	—	—
Do.	Medagamagodapatana, &c.	Kottalbedda	875	3,021, M 94, O 94, P 94, Q 94, Z 94, A 95, B 95, C 95, D 95, H 95	129 0 13	1, Kukulege Sinno Appu of Wewita in Kalutara, Rayigam korale; 2, Kukulege Harmanis Appu of Bandarawela	—
August 21, 1903	Pallearawehena, &c.	Moretota	28	107, 38, 39, 31	14 2 21	—	—
Do.	Kuriarawepatana	do.	28	18	1 0 30	—	—
Do.	Malabodagollekele, &c.	Halpe	36	11, 36, 36*a*, 36*b*, 36*c*, 37, 38, 39, 43, 44, 45, 46, 47, 48, 49, 52, 53, 56, 57, 58, 59, 60, 61, 65, 66, 67, 68, 69, 70, 79, 80, 81	2,140 2 14	—	—
September 4, 1903	Tambagalapatana *alias* Batudelulpotehena	Moretota	28	74	2 3 27	—	—
Do.	Medipida, &c.	Halpe	36	101, 103, 12	2 0 25	—	—
Do.	Kiriwanegalahena, &c.	Moretota	28	13, 33	5 2 22	—	—
Do.	Mahatennehena, &c.	do.	28	121, 158½, 35	35 0 15	—	—
Do.	Midenwetunaellehenapatana, &c.	do.	28	36, 26, 25	3 0 21	—	—
September 8, 1903	Wataliyaddehena *alias* Mahayaya, &c.	Halpe	36	14, 18	23 3 20	—	—
Do.	Godagediyehena	do.	36	95*a*	4 0 14	—	—
Do.	Peerapandowe-elekele, &c.	do.	36	105, 69*b*, 69*c*, 8, 26, 16	8 3 21	—	—
Do.	Talagahahena	Gotuwela	2	T 1	0 0 37	Toilagahagedara Huda of Gotuwela	—
Do.	Kahambiliyagodapatana	Idamegama	17	15	3 2 15	Kirinde Idame Appuhami of Dehiwinipalata	—
September 25, 1903	Landekumburehena	Gotuwela	2	W	1 0 5	—	—
Do.	Miriyagahaulpotepatana	Halpe	36	64*a*	22 0 30	—	—
Do.	Namunakulakele	Namunukula	647	2,304	667 0 8	—	—
Do.	Kendagediyepatana *alias* Kudagediyapatana, &c.	Halpe	36	72, 41	4 2 13	Walasbeddegedara Kiriwante of Halpegama	—
Do.	Waralhena	do.	36	74	1 3 32	S. N. K. B. Mullegama of Dehiwinipalata	—

September 25, 1903	...	Gasgollegodahena, &c.	...	Moretota	...	28	113, 114	9	1	2	1, Bokotuwewattagedara Heen Punchirala; 2, Bokotuwewattegedara Punchirala; 3, Bokotuwewattegedara Kawrala; 4, Bokotuwewattegedara Kiri Banda; 5, Bokotuwewattegedara Vidane; 6, Bokotuwewattegedara Menikrala, 7, Pallegedara Issahamy; 8, Ensalbedde Badderala; 9, Bokotuwewatta Huduhami; and 10, Bokotuwewatta Punchirala, all of Moretota	—	—
Do.	...	Huriyahelapatana *alias* Medawattehena	...	do.	...	28	10	1	3	22	—	—	—
Do.	...	Paluwatubeddetimbirigahahulaha	...	Unagolla	...	11	1, 16	207	0	36	—	—	—
Do.	...	Weliwattepatana, &c.	...	Weliwatta	...	12	6, 10, 11	114	1	20	—	—	—
October 9, 1903	...	Welitenna, &c.	...	Kurukude	...	14	12, 16, 21, 22, 23, 24, 37, 38, 59, 60, 68, 69, 70, 71	620	1	17	—	—	—
Do.	...	Udaneluwehena	...	Moretota	...	28	83	1	0	13	—	—	—
Do.	...	Gorandiyawakahena, &c.	...	Kanupelella	...	5	11, 12	15	3	17	—	—	—
Do.	...	Huriyagahahena	...	Halpe	...	36	91	7	2	39	—	—	—
Do.	...	Dumbiliyahenedeniya	...	Moretota	...	28	102	0	1	0	—	—	—
Do.	...	Perawattehena	...	do.	...	28	91	9	2	28	1, Merenjiralage Martelis Fernando; and 2, Korawakankarange Don Bastian, both of Moretota	—	—
Do.	...	Dumbiliyahena	...	do.	...	28	101	1	3	0	Talawegedara Menika of Moretota	—	—
Do.	...	Natolewewamukalana, &c.	...	Bibilihela	...	1	1, 2, 3, 4, 5	881	3	26	—	—	—
Do.	...	Weliwattehenyaya, &c.	...	Weliwatta	...	12	5, 18, 7	27	2	22	—	—	—
Do.	...	Alubogollepatana	...	Alubogolla (Unagolla)	...	8	2	39	0	20	—	—	—
Do.	...	Agalawewemukalana, &c.	...	Wellawayawasama	...	Topo. plan of Uva	A	6,315	0	0	—	—	—
Do.	...	Hapukanuwepatana	...	Kurukude	...	14	8	0	3	18	—	—	—
Do.	...	Badullagahagoda, &c.	...	Godegama	...	10	22, 21	78	1	12	—	—	—
Do.	...	Pattiyagedarapatana	...	Pattiyagedera	...	31	71	5	0	32	—	—	—
November 6, 1903	...	Perahettiyehena *alias* Embulambearawehena	...	Perahettiya	...	30	98	4	3	38	1, Amunumulle Jayasin Mudiyanselage Sudu Banda of Bogoda; and 2, Perahettiyagedara Dehipola Siyatu of Perahettiya on behalf of Bogoda Vihare	—	—
Do.	...	Dimbulgahamadapatana, &c.	...	Kanupelella	...	5	10	96	0	0	K. A. V. Tilakaratna on behalf of his mother Abewickrama Babanonahamine, the widow of late K. L. Perera Tilakaratna Arachchi of Badulla	—	—

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent.	Claimants (if any).	Remarks.
					A. R. P.		
November 6, 1903 ...	Alubogollewattehena *alias* Ambalankapallepatana	Welikemulla ...	3	2	3 3 24	Assan Beebee of Badulla	—
November 13, 1903 ...	Aralugashinnepatana, &c. ...	do. ...	3	30, 31, 32, 33, 34, 35	386 0 33	—	—
Do. ...	Kottambahinnepatana ..	Kanupelella ...	5	6	21 0 17	1, Millagahawattegedara Kiriwante of Hingurugamuwa ; 2, Patanigaswatte Hudu Banda ; 3, Tibottugaha-arawegedara Siyatu ; 4, Tibbotugaha-arawegedara Appu, all of Kanupelella ; 5, K. A. V. Tilakaratna of Badulla	—
Do. ...	Dowapatana, &c. ...	Malitenna ...	73	5, 9, 12, 18, 23, 25, 26, 28, 29, 30, 31, 32, 33, 14, 21, 17	298 0 6	—	—
Do. ...	Ambagahamulledowa, &c. ...	do. ...	73	15, 15*a*, 16	10 1 25	—	—
Do. ...	Weliwattepallearawehena, &c. ...	Weliwatta ...	12	16, 19, 20, 14	66 2 26	—	—
Do. ...	Kunumellagastennepatana, &c. ...	Welikada ...	72	10, 11, 12, 24, 33, 34, 1, 5, 26	458 2 23	—	—
Do. ...	Udagabellakele, &c. ...	Ella ...	75	3, 6, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22	725 1 34	—	—
December 4, 1903 ...	Kirimaduwehena ...	Godegama ...	10	19, 20	4 2 22	—	—
December 11, 1903 ...	Paluwatubeddepatana ...	Unagolla ...	11	2	5 0 23	1, Epitawattegedara Hudu of Godegama ; and 2, Unagollegedara Lankadikara Mudiyanselage Tissahami of Weliwatta	—
Do. ...	Buddugewagura, &c. ...	Yahala-arawa ...	44	3, 4, 11, 12, 13, 18, 23, 25, 27, 28, 29, 31, 34, 36	145 1 17	—	—
December 18, 1903 ...	Kahatapitiyepatana, &c. ...	Kabilidowa ...	50	2, 4	45 0 25	—	—
Do. ...	Galbodatennehena *alias* Galbodatennepatana, &c.	Idamegama ...	17	24, 26	24 0 20	Punchi Banda Dambawinne Basnayaka Nilame of Dambawinne	—
December 31, 1903 ...	Kiridonamankadapatana *alias* Kiridonamankadamedahena	Moretota ...	28	148	5 1 8	1, Ekanayaka Ratnayaka Jayasundera Mudiyanselage Banda; 2, Ekanayaka Ratnayaka Jayasundera Mudiyanselage Ran Banda ; 3, Ekanayaka Ratnayaka Jayasundra Mudiyanselage Kiri Banda ; 4, Dandugalakumbure Kalu Banda ; 5, Kehelwattekumbure Ganeti ; 6, Kohilwattegedara Menikhami ; 7, Kohilwattegedara Punchirala, all of Moretota	—

December 31, 1903	Migollehena	Wellewela	18	3*a*	2	0	16	1, Wellewela Siribaddena; 2, Wellewela Kiri Banda; 3, Wellewela Appu; 4, Ulugedara Appuhamy; 5, Ulugedara Punchirala; 6, Wellewela Heen Menika	—
Do.	Meda-arawehena, &c.	do.	18	3*b*	4	1	0	do.	—
					18947	0	38		
PROVINCE OF SABARAGAMUWA. *Ratnapura District.*									
January 16, 1903	Palawelakandehenyaya	Palawela in Nawadun korale	745/10	H 91¼	31	1	6	D. A. Herathami and others	Order under section 4 (1)
Do.	do.	do.	745/10	H 91½	21	2	26	do.	do.
March 6, 1903	Kahawattemukalana	Kahawatta in Nawadun korale	614	70	100	1	0	do.	Order under section 2
Do.	do.	do.	614	84	53	1	0	do.	do.
Do.	Doraledeniya	do.	614	83	0	0	35	do.	do.
June 19, 1903	Beraliyadolamukalana	Epitawala in Kuruwiti korale	740	4	64	0	0	do.	do.
Do.	Kosgulanemukalana	do.	740	5	14	0	18	do.	do.
Do.	Ankenagalamukalana	do.	740	17	75	1	0	do.	do.
Do.	Kodagalamukalana	do.	740	24	47	3	0	do.	do.
Do.	Etamoralanda	Yatipanwa in Kuruwiti korale	728	77	14	2	0	do.	do.
July 17, 1903	Mugunekele	Medagama in Meda korale	8,398	6,173	30	3	20	do.	do.
Do.	Weraniyagodawattehena	Galukagama in Kuruwiti korale	1,031	2,837	18	1	0	do.	do.
August 28, 1903	Doraluketiyamukalana	Meddekanda in Kuruwiti korale	714	31	6	3	30	do.	do.
Do.	do.	do.	714	32	5	2	36	do.	do.
Do.	do.	do.	714	34	14	3	5	do.	do.
Do.	Talawehena	do.	714	37	1	1	28	do.	do.
Do.	Idiriyagewattemukalana	do.	714	44	16	1	0	do.	do.
Do.	Indiriyingewattamukalana	do.	714	46	1	3	29	do.	do.
Do.	Barandeniyemukalana	do.	714	56	13	3	4	do.	do.
Do.	do.	do.	714	57	41	3	18	do.	do.
Do.	Bakiniketiyamukalana	do.	714	102	1	3	10	do.	do.
Do.	Udawattalanda	Nilagama in Nawadun korale	614	42	4	3	19	do.	do.
Do.	Puwakgahadeniyegodahena	do.	614	43	7	3	6	do.	do.
Do.	Puwakgahadeniya	do.	614	44	0	1	18	do.	do.
Do.	Mediyawatta-aturamukalana	do.	614	45	3	1	36	do.	do.
Do.	Nilagamamukalana	do.	614	65	162	1	33	do.	do.
Do.	Jambugahahenemukalana	do.	614	65½	1	2	7	do.	do.
Do.	Pattiyadeniyagodahena	do.	614	67	1	1	8	do.	do.
Do.	do.	do.	614	68	0	1	10	do.	do.
Do.	Paranapattiyadeniya	do.	614	66	0	2	29	do.	do.
Do.	Kaludiwalamukalana	Horahinalla in Atakalan korale	5	D 5	87	3	20	do.	do.
Do.	Dikhenemukalanaroda	do.	5	I 5	12	3	13	do.	do.
September 25, 1903	Pownuwemukalana	Pownuwe in Nawadun korale	30	3	42	3	14	do.	do.
Do.	Danmaletennemukalana	do.	30	5	33	3	0	K. V. Mudalihami	Order under section 4 (1)
Do.	Holipitiya-arambemukalana	do.	30	12	7	0	10	do.	do.
					943	0	8		

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent.	Claimants (if any).	Remarks.
Kegalla District.					A. R. P.		
February 5, 1903	Galandahenamukalana	Pukunuwala	S.P.S.G.O. 59	1,165*a*	54 2 20	—	—
Do.	Tennapitiyayawattehena	do.	60	1,165*b*	19 0 36	—	—
February 20, 1903	Kahatagastennemukalana	Walgama	P. P. 8,151	5,582	67 1 33	—	—
Do.	Kahatagahamukalana	do.	8,151	5,584	5 2 13	—	—
Do.	Polkotuwemukalana	do.	8,151	5,583	23 0 29	—	—
Do.	Kongolla *alias* Aalakolamadamukalana	Kosinna	S.P.S.G.O. 61	1,194	54 2 28	—	—
Do.	Korossemukalana	Yatagama	P. P. 4,589	305	64 2 20	—	—
March 28, 1903	Dewungalemukalana	Batmabura	P. P. 7,984	5,207	1 0 11	—	—
Do.	do.	do.	7,984	5,210	11 3 0	—	—
March 25, 1903	Kirigalapallahena	Liyanegekanda	111	2,253	149 0 0	G. Siddappu of Kahanawita	—
March 27, 1903	Nillehena	Ganegoda	4,658	V 72	4 1 30	—	—
Do.	Nallehena	do.	4,658	W 72	15 1 6	—	—
Do.	Idendiyawellahena	do.	4,658	B 74	7 3 24	—	—
Do.	do.	do.	4,658	B 75	10 2 8	—	—
Do.	Koskandawalahena	do.	4,658	Q 73	6 1 32	—	—
Do.	Naluwehena	do.	4,658	X 72	2 1 16	—	—
Do.	Galhindahena	do.	4,658	Y 73	2 3 13	—	—
Do.	Dorownahena	do.	4,658	R 73	3 2 34	—	—
Do.	Egallamullahena	do.	4,658	H 73	4 3 10	—	—
April 9, 1903	Malapaluwaowita	Gonagala	68	1,265	1 3 8	—	—
Do.	Halielagawahenyaya	do.	65	1,244	300 3 4	—	—
May 2, 1903	Dummellemukalana	Kitulpone	5,933	7,581	90 2 10	Siddharta Unnanse and others of Kiulpona	—
Do.	Kotambamukalana	do.	7,675	3,798	5 0 25	—	—
Do.	Tummudunemukalana	do.	7,675	3,799	9 0 37	—	—
Do.	Kudamullehena	do.	1,034	3,499	4 1 32	—	—
Do.	Boraluwamukalana	do.	1,034	3,500	44 8 0	—	—
Do.	Hunugalemukalana	do.	1,034	3,502	3 2 0	—	—
Do.	Hunugalehena	do.	1,034	3,503	1 3 28	—	—
Do.	Hunugaleketakalagahamulahena	do.	1,034	J 299	5 2 11	—	—
Do.	Tummudunehena	do.	1,034	K 229	5 1 33	—	—
Do.	Boraluwemukalana	do.	250	524	7 2 12	—	—
Do.	Kahagallemukalana	do.	186	1,013	83 2 0	—	—
May 13, 1903	Mukalanahena	Imbulpitiya	S.P.S.G.O. 55	1,149	126 2 14	—	—
Do.	Pangollamukalana	do.	55	1,150	122 3 0	—	—
Do.	Lewalamukalana	do.	57	1,163	23 2 32	—	—
Do.	Murutahenamukalana	do.	57	1,164	12 0 20	—	—
Do.	Iwillaketiyamukalana	do.	58	1,162	7 2 21	—	—
July 1, 1903	Wattehena	Welihelatenna	P. P. 194	390½	14 3 26	—	—
June 20, 1903	Kahagollewalamukalana	Dombemada	946	2,687	55 1 6	—	—

June 23, 1903	...	Mudunehena	...	Naranbedda	...	S.P.S.G.O. 69	A	36	0	35	—	—
Do.	...	Galapitahena	...	do.	...	69	B	23	2	28	—	—
Do.	...	Puwakgahamulahena	...	do.	...	69	C	3	2	31	—	—
Do.	...	Miyanakolamadehena	...	do.	...	69	D	0	0	37	—	—
Do.	...	Talagahamula-akula	...	do.	...	68	1,209	96	3	10	—	—
July 21, 1903	...	Jambugahamukalana	...	Godagampola	...	P. P. 434	1,132	14	2	34	—	—
Do.	...	Kowila-atularoda	...	do.	...	434	1,133	5	1	5	—	—
Do.	...	Walabeaditenna	...	do.	...	434	1,134	6	2	12	—	—
Do.	...	Madolawalamukalana	...	do.	...	434	1,135	5	2	16	—	—
Do.	...	Kowila-atulaheressa	...	do.	...	434	1,136	2	2	10	—	—
Do.	...	Medahena	...	do.	...	6,849	670	127	3	0	—	—
Do.	...	Goluwagodamukalana	...	do.	...	W. L. O. S. 55	1,161	81	2	0	—	—
July 31, 1903	...	Millagahamulamukalana	...	Kottanawatta	...	73	A	0	0	33	—	—
Do.	...	do.	...	do.	...	73	B	0	0	26	—	—
Do.	...	do.	...	do.	...	73	C	1	0	7	—	—
Do.	...	Totillagolla	...	do.	...	70	A	7	2	18	—	—
Do.	...	Borellemukalana	...	do.	...	71	P	5	3	30	—	—
Do.	...	Renadalehena	...	Gangoda	...	79	B	7	1	10	—	—
Do.	...	Wallahagolla	...	do.	...	79	C	7	0	10	—	—
Do.	...	Moragollehena	...	do.	...	79	D	7	2	18	—	—
September 10, 1903	...	Werellamukalana	...	Petigammana	...	P. P. 8,108	25	12	2	0	M. M. Ukku Banda and another of Werake	—
Do.	...	Galkotuwehena	...	Ilukgoda	...	W. L. O. S. 78	A	2	3	0	—	—
Do.	...	Kurukohemukalana	...	do.	...	78	B	1	0	32	—	—
Do.	...	Suduhena	...	do.	...	77	A	11	1	15	—	—
Do.	...	Paragahaelahena	...	do.	...	77	B	12	1	25	—	—
Do.	...	Galtembehena	...	do.	...	77	C	9	1	32	—	—
October 10, 1903	...	Kotawellehena	...	do.	...	76	1,239	5	0	0	—	—
November 12, 1903	...	Tulmankadahena	...	do.	...	87	1,238	3	3	0	—	—
November 23, 1903	...	Welikandemukalana	...	Dehimaduwa and Weligalla	...	P. P. 7,948	4,952	18	3	20	M. N. Punchirala and others of Weligalla	—
							4,953	24	2	23		
								1,981	2	9		

Total Extent declared Crown.

		A.	R.	P.	A.	R.	P.
Western Province	...	—			37	1	1
Central Province :—							
Kandy District	...	36	0	14			
Matale District	...	1,936	0	30			
					1,972	1	4
Southern Province :—							
Galle District	...	1,095	0	6			
Matara District	...	23,836	3	20½			
Hambantota District	...	7,575	3	14			
					32,507	3	0½
Carried forward	...	—			34,517	1	5½

		A.	R.	P.	A.	R.	P.
Brought forward	...	—			34,517	1	5½
North-Central Province	...	—			3,610	2	35
Province of Uva	...	—			18,947	0	38
Province of Sabaragamuwa :—							
Ratnapura District	...	943	0	8			
Kegalla District	...	1,981	2	9			
					2,924	2	17
Total	...				59,999	3	15½

B.—Annual Return of all Cases of Lots of Forest, Chena, Waste, and Unoccupied Lands which have been referred to Court, and in which there has been a Final Decision in favour of the Crown, under Ordinance No. 1 of 1897, during the Year 1903

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent.	Claimants (if any).	Remarks.
					A. R. P.		
WESTERN PROVINCE. Nil.							
CENTRAL PROVINCE. *Kandy District.*							
March 26, 1903 (date of appeal decision)	Ebohinna and Galapitayaya ...	Nilawala in Pata Hewaheta...	Surveyed by J. T. Trowell, Dec. 1901	—	61 1 6	U. R. N. A. Punchi Etana and another	—
Nuwara Eliya District. Nil.							
Matale District. Nil.							
SOUTHERN PROVINCE. *Galle District.*							
December 11, 1903 ...	Badankanda or Annasigalakanda ..	Baddegama ...	5,025	V 569 10,563 10,564 10,565 10,566 10,567			
			1,811	3,870 3,873 3,878½	135 3 32	J. H. Madanaika of Baddegama	Galle D. C. case. Decree No. 4 The extent for which the Crown got judgment is 134A. 1R. 5P., less the area of costs U, V, W, X in plan marked T
			1,622	1,547			
			1,055	8,436 8,437			
Matara District.			5,032	10,582 10,584			
January 30, 1903 ...	Rukkepuhena, &c. ...	Gammeddegama ...	W. L. O. S. No. 57	J, K, L, M, N, R, S, T	69 2 7	Girigoris Fernando Abayasinha Gunasekara Appuhami of Welitara	Decree No. 9,773
Do. ...	Paragahahena *alias* Paragahalangahena, &c.	Siyambalagoda ...	12	20, 21, 25	34 1 27	Charles Abeyawickremasinha Gunawardana of Kotagala	Decree No. 9,775
March 27, 1903 ...	Udadeniya, &c. ...	do. ...	12	35, 36	23 2 39	1, Don Deonis Abeyasinhe; 2, Don Mathes Abeyasinhe, both of Siyambalagoda	Decree No. 9,779
Do. ...	Welangahahena, &c. ...	do. ...	12	87	68 2 13	Do.	Decree No. 9,777

June 5, 1903	...	Diyahitinagalahena *alias* Diyasewelgalahena *alias* Galpotteliyaddehena *alias* Hindeniyeatmaga	Siyambalagoda	...	12	37, 45, 46	66	2 19	1, Lewpotdeniyage Abaran ; 2, Lewpotdeniyage Babanhami ; 3, Lewpotdeniyage Don Juanis ; 4, Lewpotdeniyage Wattuhami ; 5, Wanniachchige Juanis ; 6, Senanayakagamage Davit, all of Siyambalagoda ; 7, Galappattige ; DionisSilva of Nupe in Matara; 8, Lewpotdeniyage Don Davit ; 9, Lewpotdeniyage Pinhami ; 10, Lewpotdeniyage Lokuhami ; 11, Lewpotdeniyage Balahami, all of Siyambalagoda ; 12, Pedururiyanage Bastian Appu ; 13, William Rajapaksa	Decree No. 9,780
Do.	...	Masmullekele	Owitigamuwa	...	4,123	Portion of 10,700	149	2 20	1, Kattirige Don Siman of Owitigamuwa ; 2, Ranatungaliyanage Don Andris of Kaulgalamulla ; and 3, Tumbegiganage Andris of Owitigamuwa	Decree No. 9,762
July 17, 1903	...	Mahahena	Ampanagala	...	38	10	17	2 0	Don Andris Abegunawardana of Ampanagala	Decree No. 9,809
Do.	...	Kongahahenyaya	Kirinda	...	4,415	11,722	93	0 15	1, Kattiri Vidanage Don Bastian of Aturaliya ; 2, Ekanayakage Babunhami of Kirinda ; 3, Urapolage Babune of Kirinda ; and 4, Manangodagamage Thoronis de Silva of Ahangama	Decree No. 9,782
August 14, 1903	...	Uswelhenyaya	Pasgoda	...	21	11	35	1 30	Muramudalige Don Dines	Decree No. 9,818
September 4, 1903	...	Niyangamalahena *alias* Hingurupatalehena *alias* Katuimbuledeniya-atmaga	Siyambalagoda	...	12	34*a*	19	2 20	Abayawikkarama Bamunusinkankanange Don Nikulas	Decree No. 9,778
November 13, 1903	...	Pelapandurahena, &c.	Gammeddegama	...	W. L. O. S. No. 57	U, X, W	52	1 35	1, Girigoris Fernando Abayasinha Gunasekara Appuhami of Welikada in Bentota-Walallawiti korale ; 2, Charles de Abrew Wijesinha of Godagedara in Bentota-Walallawiti korale, now of Hakmana ; and 3, Munasinarachchige Don Hendrick Appuhami of Parapamulla	Decree No. 9,774
December 4, 1903	...	Bulugahahena, &c.	Ampanagala	...	38	13, 18, 21, 23	266	0 7	1, Don Andris Abayagunawardana ; and 2, Hatarasingamage Don Carolis, both of Ampanagala	Decree No. 9,811
Do.	...	Paragahahenyaya	do.	...	38	1	149	3 0	do.	Decree No. 9,812
							1,046	1 32		

Date of Declaration in favour of the Crown.	Name (if any).	Situation.	No. of Plan.	No. of Lot.	Extent.	Claimants (if any).	Remarks.
Hambantota District.					A. R. P.		
November 13, 1903 ...	Samayanara, &c. ...	Mamadala ...	4,163	W 463	763 0 0	1, Gunasekaragamage Don Davit of Mamadala; 2, Gamsin Arachchige Don Juwanis, deceased, now represented by 3, Gamsin Arachchige Pedrishami of Mamadala	Tangalla D. C., Decree No. 2.
NORTH-CENTRAL PROVINCE.							
September 30, 1903 ...	Indiwewakele ...	Bogahawewa ...	W. L. O. S. 5	1	125 1 0	1, Appuralage Sudduhami; 2, Kapuralage Banda; 3, Punchirala *ex* Arachchi; 4, Appuralage Menikrala; 5, Appuralage Banda; 6, Appuralage Naidurala; 7, Pettappuge Kapuruhami; 8, Pettappuge Dingiri Eteni; 9, Kapuruhamige Appurala; 10, Mohottalage Vannihami; 11, Mohottalage Velate; 12, Punchi Banda, Vel-vidane; 13, Menikralge Vannihamy; 14, Menikralage Kirimenika; 15, Badderalage Bokke Eteni; 16, Punchiralage Gamaralage Menikrala; 17, Punchirala Gamaralage Appurala; 18, Settategе Vannihamy; 19, Menikrala Vel-vidane; 20, Ranhami *ex* Vel-vidane; 21, Dissanayaka Mudiyanselage Punchi Banda; 22, Appuralage Sudduhami; 23, Iyatige Menikrala; 24, Kauralage Banda	—
Do. ...	Indiwewakele ...	do. ...	—	2	8 3 18		
Do. ...	Indiwewawela ...	do. ...	—	4	3 2 0		
Do. ...	Katukeliyawakele ...	do. ...	—	5	206 2 0		
Do. ...	Weehena ...	do. ...	—	7	2 1 6		
					346 1 24		
PROVINCE OF UVA. Nil.							
PROVINCE OF SABARAGAMUWA.							
Ratnapura District.							
January 28, 1903 ...	Pallepitiya or Debanuwemukalana ...	Kalalella in the Atakalan korale	10	29	81 1 0	D. S. Daundasekara and others	Case No. 1,066, District Court, Ratnapura
Do. ...	Karawweowilana ...	do. ...	10	46*b*, *c*, *d*, *e*, *f*, and *h*	8 2 12	do. ...	do.
Do. ...	Ellehena and Kattiriyahena ...	do. ...	10	70	18 3 15	do. ...	do.
Do. ...	Morandelamahagulana ...	do. ...	10	76	243 3 0	do. ...	do.
November 20, 1903 ...	Puswelahena ...	Ellegedara in the Kuruwiti korale	555	A 70	7 1 13	J. L. M. Muhammadu Lebbe Marikar Hadjiar	Case No. 1,107, District Court, Ratnapura. Judgment in favour of the Crown entered on October 10, 1902, was affirmed in the Supreme Court on November 20, 1903

November 20, 1903 ...	Kekerihena, Atmadettehena, and Aliyakapuhena	Ellegadara in the Kuruwiti korale	555	B 70	38 2 0	J. L. M. Muhammadu Lebbe Marikar Hadjiar	Case No. 1,107, District Court, Ratnapura. Judgment in favour of the Crown entered on October 10, 1902, was affirmed in the Supreme Court on November 20, 1903
Do. ...	Dikhena ...	do. ...	555	F 70	3 3 29	do. ...	do.
Do. ...	Madolwitiwalahena ...	do. ...	555	H 70	2 1 22	do. ...	do.
Do. ...	Madolwitiwala Mukalana ...	do. ..	555	I 70	150 0 0	do. ...	do.
November 11, 1903 ...	Pidawillemukalana ...	Kitulpe in the Kuruwiti korale	W. L. O. S. No. 1	1	51 2 28	W. D. Tilakaratne and others ...	Case No. 1,111, District Court, Ratnapura. Judgment in favour of the Crown entered on October 18, 1902, was affirmed in the Supreme Court, on November 11, 1903
					606 0 39		
Kegalla District.							
January 13, 1903 ...	Wagollekele ...	Yodagama ...	5,836	7,336	17 2 16	K. Silindu of Yodagama ...	—
Do. ...	Wagollemukalana ...	do	7,665	3,786	22 1 13		—
September 23, 1903 ...	Gorakagahamademukalana ...	Waddeniya, Lendaramulla, Ambakumbura	620	1,870	69 2 0	Siddharta Unnanse and others of Lendaramulla	
					109 1 29		

XXII.—1904.

RETURN

OF

LANDS RESUMED BY GOVERNMENT UNDER ORDINANCE No. 4 OF 1887 DURING 1903.

Ordered by His Excellency the Governor to be Printed.

Colombo:

PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 5 cents.

1904.

LANDS RESUMED BY GOVERNMENT UNDER ORDINANCE No. 4 OF 1887 DURING 1903.

Province.	District.	Date of Resumption.	Extent. A.	R.	P.	Situation.	Name of Land.	Previous Owner.	Remarks.
Central ...	Nuwara Eliya	February 28, 1903 ...	2	2	20	Mahagastota in the town of Nuwara Eliya...	Mahagastota ...	Arnoldus Solomon	—
Do. ...	Do.	do. ...	7	0	29	do. do. ...	do. ...	A. T. Walker ...	—
Do. ...	Do.	do. ...	19	2	20	do. do. ...	do. ...	C. C. Raux ...	—

XXIII.—1904.

REPORT

ON

THE BIOLOGICAL RESULTS OF THE PEARL FISHERY OF 1904.

By JAMES HORNELL, F.L.S.,
Marine Biologist and Inspector of Pearl Banks.

(In continuation of Sessional Paper XIII. of 1904.)

Ordered by His Excellency the Governor to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 90 cents.

1904.

CONTENTS.

I.—Biological Results relating to Pearl Oysters.

A.—*Details of the Oysters found.* PAGE

Number, distribution, and sizes of the fishable oysters 1
Number, distribution, and sizes of the immature oysters 2

B.—*Past History of the Oysters found.*

C.—*Causes of Decrease since 1902.*

Sand disturbance 4
Overcrowding 4
Subsidiary causes 5

D.—*Spat and Reproduction.*

Distribution and condition of spat in 1904 ... 5
Condition of gonads in the older oysters ... 5
Spawning maxima 5
False spat 6

E.—*Fishery Prospects.*

F.—*Pearl Production.*

Abundance of parasitic cestode larvæ ... 7
Differences in the yield and character of pearls from different regions 7
Shell-pearls 8

G.—*Demarcation of the Natural Divisions of the Cheval Paar.*

Division of the Cheval Paar into eleven sections 8
Salient characteristics of the subdivisions ... 8
Comparison of their relative natural importance 9

II.—Cultivation of the Pearl Banks. PAGE

History of the proposal to transplant spat at the 1904 fishery 10
Necessity for improving the Cheval area by cultching 10
The comparative value of different cultch materials 11
Clean banks essential to successful cultivation 11
The importance of thinning out overcrowded beds 12
The activity of spat: an advantage in the struggle for existence 12

III.—Physical and Meteorological Observations.

Specific gravity and temperature of the sea on the pearl banks, February to April, 1904 ... 12
The weather during the fishery 13
A phosphorescent phenomenon ... 13
Trichodesmian calm 13
Surface drift 13

IV.—Recommendations.

The improvement of inspections and of land-marks 13
Cultural requirements :—
(1) Transplantation 14
(2) Cultching 15
(3) Cleaning of the ground 14
(4) Thinning out of overcrowded paars ... 14
Further investigation of the life-history of the pearl-inducing cestode 15
Experiments to determine the direction of surface drift 15
Establishment of a chank fishery ... 15

APPENDIX.

I.—Tables of the Dimensions of Representative Oysters examined, February and March, 1904.

PAGE

(*a*) Pearl oysters $4\frac{1}{2}$ to $4\frac{3}{4}$ years old from the South-West Cheval Paar 17
(*b*) Pearl oysters $4\frac{1}{4}$ to $4\frac{3}{4}$ years old from the North-West Cheval Paar 17
(*c*) Pearl oysters $2\frac{1}{4}$ to $2\frac{1}{2}$ years old from the South Moderagam Paar 18
(*d*) Pearl oysters $2\frac{1}{4}$ to $2\frac{1}{2}$ years old from the Mid-West Cheval Paar 18
(*e*) Pearl oysters $2\frac{1}{4}$ to $2\frac{1}{2}$ years old from the North-West Cheval Paar 19
(*f*) Pearl oysters $2\frac{1}{4}$ to $2\frac{1}{2}$ years old from the Dutch Moderagam Paar 19

II.—Diagrams, Plans, and Drawings.

No. 1.—Specimen of the diagrams filled up by the coxswains of the inspection boats when engaged upon the examination of a pearl bank.
No. 2.—Specimen of the Inspector's final diagram obtained by the combination of the four coxswains' diagrams. This represents the distribution of oysters over a circular area $1\frac{1}{2}$ mile in diameter.
No. 3.—Plan of the Cheval Paar region illustrating the proposed system of subdivision into culture areas.
No. 4.—Plan of the same region showing the extent of the inspection carried out during February and March 1904,
No. 5.—Plan showing the distribution of fishable and immature oysters on the Cheval Paar in February, 1904.
No. 6.—Plan of the Cheval Paar region on which are plotted the areas which have yielded pearl fisheries between 1821 and 1873, inclusive.
No. 7.—A similar plan continuing the record from 1874 to the present year.
No. 8.—A. Government divers engaged in picking out pearls from oyster washings.
B and C. Two dissections of pearl oysters showing cyst-pearls *in situ*. In one the pearl lies in the ventral pallial region, in the other in the pallial tissue of the posterior dorsal region. From original photographs.
No. 9.—Six drawings of the inner surface of pearl-oyster valves showing the distribution of attached muscle pearls. In figs. A, B, C, and D the pearls are attached to the pallial muscle scars in the palpar region. Fig. E shows a large botryoidal mass of partially fused muscle pearls below the scar of the posterior levator muscle; it also shows five small muscle pearls upon the retractor muscle scar. Fig. F shows a series of tiny muscle pearls disposed in a long series along the posterior margin of the abductor scar. Natural size.
No. 10 to 12.—Temperature charts showing the variations in temperature of the sea on the pearl banks for the months of February, March, and April, 1904.
Nos. 13, 14, and 15.—Similar charts showing the range of the temperature of the air in the shade over the same period.

REPORT ON THE BIOLOGICAL RESULTS OF THE PEARL FISHERY OF 1904.

By JAMES HORNELL, F.L.S.,

Marine Biologist to the Ceylon Government and Inspector of Pearl Banks.

I.—Biological Results relating to Pearl Oysters.

A.—*Details of the Oysters Found.*

The oysters found during the recent inspection were of two distinct generations, the older being from $4\frac{1}{4}$ to $4\frac{3}{4}$ years old, the younger from $2\frac{1}{4}$ to $2\frac{3}{4}$ years. The former were of the same brood as those fished on the Eastern Cheval in 1903, and were therefore of a very satisfactory age for fishing this year. Those of the younger brood will hereafter be termed "immature," not in the sense of sexual immaturity, but in regard to pearl-yield.

The fishable oysters lay as a discontinuous north and south band along the seaward or western side of the Western Cheval. Save for a scattered remnant left over from last year's fishery on the Eastern Cheval and for occasional individuals forming the nuclei of bunches of younger oysters on the parts covered by the immature generation, no other oysters of fishable age were found. Those present last year on the Periya Paar Karai and Vankali Paar were gone, and the huge bed upon the Muttuvaratu Paar, estimated by Captain Donnan in 1902 at a total of 277,000,000 oysters, and which would have been fishable this year, had also disappeared, being partially replaced by a later brood of $2\frac{1}{2}$-year olds.

On the Karaitivu Paar also, none of the twenty-five millions of oysters, $1\frac{1}{2}$ to 2 years old, found there in April, 1902, remained, the bank being bare save for a few handsful of 2-year olds. A small bed of this fresh generation of oysters was also discovered on the Dutch Moderagam Paar.

The details respecting the numbers and distribution of these oysters may be summarized thus:—

Number, Distribution, and Sizes of the Fishable Oysters.

The beds of $2\frac{1}{2}$ to 3-year old oysters on the Western Cheval (comprising the South-West, Mid-West, and North-West sections), which I saw for the first time in February, 1902, were found to have the same general disposition, but to have largely decreased in area, and to be represented by several detached patches thickly covered with $4\frac{1}{2}$ to 5-year olds on the South-West Cheval, by a large one of more thinly spread oysters of the same age on the North-West section, and by a third of rather smaller extent on the Mid-West, the southern end of the last-named joining the north-west patch on the South-West section (see Pl. No. 5).

The South-West patches covered in the aggregate an area of 2,754,021 square yards, with an average of twenty-two oysters per dive on 1,778,676 square yards, and of twenty-one on the remainder. As each dive is estimated to account for an area of three square yards, I estimated the total number of oysters on this section to be 19,500,000, sufficient to give daily loads of 10,000 oysters per boat to a fishing fleet numbering 100 boats for a period of $19\frac{1}{2}$ days, each boat being presumed to have a complement of ten divers.

The oysters on the North-West section amounted to 9,000,000, covering an area of 1,685,460 square yards, a number based upon an average of twenty oysters per dive on 716,100 square yards and thirteen per dive on 969,360 square yards. Although apparently sufficient to give fishing for 100 boats for nine days at an average load per boat of 10,000 oysters, the result of the fishery showed that the number of oysters per dive on certain portions of this bed was too low to give profitable fishing results, with the consequence that the fleet had to be moved off after only five days' fishing and the removal of a little over four millions of the oysters, rather less than half of those present.

The bed on the Mid-West had an area of 992,250 square yards, whereon I estimated there were 6,500,000 oysters, being at the rate of twenty per dive. These oysters were smaller for their age than either those of the South-West or the majority of the North-West.

The total number of fishable oysters on the three sections of the Western Cheval I estimated at 35,000,000, equal to thirty-five days fishing for 100 boats.

By far the most important of the beds found in regard to numbers as well as condition were the patches on the South-West section, for here, not only were the oysters splendidly grown for their age, but they were absolutely free from commingled young. Everywhere else there was more or less admixture of young of 2 to $2\frac{1}{2}$ years of age, greatest upon the eastern margin of the ground where they marched with the beds of the immature generation. Over those parts of the South, South-East, and South-Central Cheval, and North Moderagam occupied by oysters, the older oysters, while nearly universally present, were in a very small minority, averaging not more than one to six of those $2\frac{1}{2}$ or 2 years old.

Here and there on the northern edge of the South-East Cheval were small patches of little mixed $4\frac{1}{4}$ to $4\frac{3}{4}$-year old oysters, the remnants of the beds fished last year.

As was to be expected, the Periya Paar Karai, ravaged by Rayfish (*Trygon*, sp.) in March, 1903, gave no results, and but a few oysters of no fishery value were found on the Kondatchy Paar—ground that is utterly bad for oyster growth under present circumstances.

The sizes of average samples from the three sections were as follows :—

Name of Bank.	Depth. mm.	Length. mm.	Breadth. mm.
South-West Cheval ...	76·20	69·20	32·32
Mid-West do. ...	72·30	65·25	31·70
North-West do. ...	72·87	66·50	31·57

Some exceptionally fine oysters from a patch at the extreme south end of the Mid-West, a patch lying upon sandy bottom, rose to the high average dimensions of 76·56 by 69·16 by 34·44 mm. If we exclude the last-mentioned series average as being abnormal, we get as the general average of the $4\frac{1}{4}$ to $4\frac{3}{4}$-year old oysters fished this year 73·79 mm. by 66·98 mm. by 31·86 mm. During the course of last year's fishery (1903) I found the average size characteristic of oysters on the Eastern Cheval to be 75·51 mm. by 69·18 mm. by 31·18 mm.

Both lots originated from the same brood, and it is significant that, although this year's oysters are a full year older, their size, except in regard to breadth, is decidedly inferior to the average of those fished last year from the Eastern Cheval. This marked characteristic of stunted growth has long been associated with oysters from this particular region, and has frequently been referred to by Sir William Twynam and by Captain Donnan.

Occasionally this stunted growth has been so extreme that the divers and merchants have referred to such oysters as being of the Koddei-pakku variety, a form which is undoubtedly correlated with overcrowding on extensive stretches of rocky bottom.

Number, Distribution, and Sizes of the Immature Oysters.

Immense quantities of immature oysters varying from 2 to $2\frac{1}{2}$ years old cover practically the whole space on the eastern half of the Mid- and North-West sections extending eastwards into the North-Central, Central, and South-Central areas. The South and the South-East Cheval also bear very large quantities, as do also the North and the South Moderagam.

A fair-sized bed plentifully covered with oysters is at present on the Dutch Moderagam Paar, but they are too young to fish for at least a year, as the age of the majority varies from 2 to $2\frac{1}{2}$ years. These oysters represent the young spat that was noted as abundant in November, 1902 ; their growth has been at the expense of the older that were present that year, and which have been killed off by the more vigorous and numerous young.

The size of those on the North and South Moderagam Paars and those on the South, South-East, and South-Central Cheval is greater than that of those upon the remaining sections, including also the Dutch Moderagam, indicating more vigorous growth and a better food supply. Indeed, many of the oysters have a superficial appearance of being from 3 to $3\frac{1}{2}$ years old. The general superiority of these oysters is well brought out in the following tabulation of the average size of representative oysters from each of the localities named :—

Locality.	Depth. mm.	Length. mm.	Breadth. mm.
South-Central Cheval	$67\frac{3}{25}$ ...	$61\frac{4}{25}$ ...	$27\frac{6}{25}$
North West Cheval	56 ...	$51\frac{4}{5}$ ...	$23\frac{13}{15}$
North-West Cheval (another locality) ...	$61\frac{1}{8}$ ...	$57\frac{1}{2}$ ...	$23\frac{3}{4}$
Mid-West Cheval	$56\frac{3}{5}$ ...	$52\frac{3}{5}$ ...	$24\frac{3}{5}$
South Moderagam	$68\frac{17}{25}$ ...	$64\frac{4}{25}$ ...	$27\frac{7}{25}$
Dutch Moderagam	$58\frac{19}{25}$ ...	$53\frac{18}{25}$ ...	$25\frac{11}{25}$
Karaitivu Paar	$58\frac{19}{25}$ ...	$55\frac{6}{25}$ ...	$24\frac{4}{5}$

There are few oysters of an age less than two years mixed with these—an important favourable factor, as the fall of abundant spat upon a bed of oysters approaching maturity is one of the most serious dangers that beset the fruition of an oyster bed and one that is most difficult to combat.

B.—*Summary of the Past History of the Oysters Found.*

The oysters fished this year were first seen in March, 1900, by Captain Donnan, who reported that over the whole of the Western Cheval, an area nearly $5\frac{1}{2}$ miles long by 1,000 to 4,000 yards wide, young oysters three to nine months old were thickly spread. The area actually covered was estimated at 5,800 acres.

During the twelve months following an immense decrease took place in the number of oysters present and in the acreage covered, the Inspector reporting that the solid phalanx of 1900 had been broken up into three detached beds, totalling only some 1,685 acres bearing 80,000,000 of oysters.

A year later (February and March, 1902) I first saw these oysters, and noted the marked inferiority of their size to that of oysters of similar age upon the Eastern Cheval. Captain Donnan's estimate of their numbers was 123,357,000 oysters spread over an area of 2,170 acres.

At the same time it was noticed as a disquieting feature that the fresh fall of spat so generally distributed over the banks had largely invaded the Western Cheval, a large proportion of the older generation bearing each several young attached to the valves. These young oysters, upon which we now rely for the next immediate fisheries, appeared when first seen (February, 1902) to be from two to six months old.

Besides having invaded the Western Cheval, immense quantities were found on the South-Central and North-Central, South and South-East Cheval regions, and also upon the two Moderagams as well as upon many of the southern banks extending from Negombo to Karaitivu.

In November, 1902, the numbers on the Western Cheval bank were given by Captain Legge as 57,605,000 occupying 936 acres ; owing to bad weather the whole of the bank was not surveyed. No

other numerical estimate was made till my inspection of this year, when a very careful estimate placed the number remaining at 35,000,000 upon 1,122 acres.

Tabulation of above facts shows this history clearly :—

Date.	Number estimated.	Age in Years.	Acreage.	Number per Dive.
March, 1900 ...	Too great for calculation	$\frac{1}{4}$ to $\frac{3}{4}$	5,800	—
March, 1901 ...	80,000,000	$1\frac{1}{4}$ to $1\frac{3}{4}$	1,685	21 to 30
March, 1902 ...	123,357,000	$2\frac{1}{4}$ to $2\frac{3}{4}$	2,170	27 to 40
November, 1902 (inspection incomplete) ...	Over 57,605,000	3 to $3\frac{1}{2}$	Over 936	—
February, 1904 ...	35,000,000	$4\frac{1}{4}$ to $4\frac{3}{4}$	1,122	13 to 22

The discrepancy between the estimates for 1901 and March, 1902, appears largely explainable by the estimate of oysters per dive having been either too low for the former year or too high for the latter, estimates being liable to variation with every condition that affects a diver's powers of working. I have known divers bring up from one particular spot but ten oysters per dive when the weather conditions were unfavourable, and yet the following day, the sea being calm and warm, the same men would report double the number. To arrive at accurate estimates the weather conditions, if adverse, should be allowed for and the total number of oysters increased accordingly.

In November, 1902, the encroachment of the younger generation had markedly increased, and with the growth of the smaller ones many portions of the Western Cheval bank—the parts where they were most abundant—had to be transferred from the category of regions bearing maturing oysters to those monopolized by the younger generation.

In February, 1903, no regular inspection was made of these latter regions, but by means of numerous descents in a diving dress I was able to obtain a fair knowledge of the distribution of the younger oysters.

On the Cheval and the North and South Moderagam the young already noted were found well grown and flourishing, and while their actual age was but $1\frac{1}{4}$ to $1\frac{1}{2}$ year, many, especially upon the Moderagams and South Cheval, had the appearance of being two years old.

On the Muttuvaratu and Dutch Moderagam the older oysters had made no increase in size, and were in an unhealthy and miserable condition. Mixed with them were considerable numbers of a younger generation apparently over one year old.

This year, as already stated, the older generation proved to have died off upon the Karaitivu, while the younger generation found last year had made fair progress and appeared moderately healthy. Similar conditions, I believe, characterize the Muttuvaratu this year, judging from the rather meagre data at my command.

Rate of Increase in Size.

So little is known with exactitude concerning the rate of growth of oysters that the following tabulation of the observed increase in size of these younger oysters has considerable value :—

Table showing Rate of Growth of Oysters aged $2\frac{1}{4}$ to $2\frac{1}{2}$ years, March, 1904.

(1) *South-East and South-Central Cheval.*

Date.	Age Years.	Size in millimetres.
March, 1902 ...	$\frac{1}{4}$ to $\frac{1}{2}$ ...	35·0 × 32·0 × —
November, 1902 ...	$\frac{11}{12}$ to $1\frac{1}{6}$ ...	50·57 × 47·52 × —
March, 1903 ...	$1\frac{1}{4}$ to $1\frac{1}{2}$ ...	54·41 × 49·75 × 20·38
March, 1904 ...	$2\frac{1}{4}$ to $2\frac{1}{2}$ ...	67·12 × 61·16 × 27·24

(2) *Moderagam Pairs.*

March, 1902 ...	$\frac{1}{4}$ to $\frac{1}{2}$ ...	37·15 × 33·20 × —
March, 1903 (North)	$1\frac{1}{4}$ to $1\frac{1}{2}$ ...	61·17 × 54·50 × 24·28
March, 1904 (South)	$2\frac{1}{4}$ to $2\frac{1}{2}$ ...	68·68 × 64·16 × 27·28

(3) *North-West Cheval.*

March, 1902 ...	$\frac{1}{4}$ to $\frac{1}{2}$ ...	33·50 × 30·75 × —
November, 1902 ...	$\frac{11}{12}$ to $1\frac{1}{6}$ ...	47·64 × 44·36 × —
March, 1904 ...	$2\frac{1}{4}$ to $2\frac{1}{2}$ ...	56·60 × 52·60 × 24·56
March, 1904 (another locality) ...	$2\frac{1}{4}$ to $2\frac{1}{2}$ ...	61·33 × 57·40 × 23·70

When these records are extended over the remaining life-period of these oysters, we shall have for the first time reliable data as to the relative rate of growth from year to year upon three of the most important of our oyster banks.

The respective increases during the first two annual intervals are as follows :—

Period.	South-East and South Cheval.	North-West Cheval.	Moderagams.
	mm.		mm.
Twelve months from age three to six months	19·41 by 17·75 by —	—	24·02 by 21·30 by —
Twelve months from age $1\frac{1}{4}$ to $1\frac{1}{2}$ year	12·71 by 11·41 by 6·86	—	7·51 by 9·66 by 3·00
Total increase for two years ...	32·12 by 29·16 mm.	27·24 by 24·25 mm. (average)	31·53 by 30·96 mm.

It will be noted that the growth both of the Moderagam and of the South-East and South Cheval oysters has been greater and more rapid than that of those upon the Western Cheval. Of the former, the Moderagam oysters, growing more quickly than those of the South-East and South Cheval up to the age of 1¼ to 1½ year and thereby attaining larger size, suffered retardation in the rate of increase thereafter. In the second annual period recorded they made but 7·51 mm. by 9·66 mm. by 3·00 mm. increase, whereas the South-East and South Cheval oysters made 12·71 mm. by 11·41 mm. by 6·86 mm. in the same period and so reduced the disparity in size caused by the more rapid growth of the Moderagam individuals at the earlier age, so much so that the difference between them at the age of 2¼ to 2½ year is but 1·56 mm. by 3·00 mm. by 0·04 mm.

This lends support to the belief elsewhere expressed (Professor Herdman's "Report," Part I., page 136) that shell growth is most vigorous during the first two years of life, or, as we may now put it, up to the size of about 60 mm. by 55 mm. by 24 mm. and that thereafter it slackens to a very slow rate, actually coming to a stand, or even retrograding as regards length and depth in the case of the stunted oysters of the Muttuvaratu and the Mid-West Cheval. As example of this slowness of growth in older oysters, take those fished this year from the South-West Cheval. These were the most vigorous and freely grown as regards the general average, and yet the increase made from November, 1902, to March, 1904, was but 5·31 mm. in depth by 3·77 mm. in length, *i.e.*, between the ages of say 3 to 3½ and 4½ to 4¾ (size in November, 1902, was 71·25 by 65·39 mm). Contrast with this the increase *within the same period* (sixteen months) when the oyster is younger, say between the ages of 11 to 18 months and 2¼ to 2½ years. In the case of oysters of this age from the South Cheval the increase has been, as shown above, as much as 16·55 by 13·64 mm., and in the case of the North-West Cheval 13·69 by 13·04 mm.,—a remarkable difference indeed.

Again, we see that the disparity of growth is most marked during early life—up to the age of two years—so that oysters situated in exceptionally favourable conditions attain such dimensions that they are liable to be credited with greater age than knowledge of their origin will warrant.

C.—*Causes of Decrease among the Fishable Oysters since March, 1902.*

The factors which tend to reduction in the number of oysters in any bed fall into two categories: (*a*) those which affect spat and oysters under one to two years of age; and (*b*) those which militate against the well-being of those in or approaching the pearl-producing stage.

The first set of inimical influences has been treated of at length by Professor Herdman, and it is only necessary here to discuss the causes which have led to great decrease since 1902 in the old generation of oysters that was fished this year on the Western Cheval and the disappearance of the same generation from the Muttuvaratu, the Dutch Moderagam, and the Karaitivu Paars.

The decrease appears to have arisen from two chief causes, overcrowding and sand disturbance, the ill-effects of which have been intensified by several of subsidiary importance. The former affected the beds in the North-West and Mid-West Cheval sections together with the Muttuvaratu and the Karaitivu Paars, the latter those of the South-West Cheval.

Sand Disturbance effected the greatest harm upon the South-West Cheval, as this area has but few stretches of exposed rock surface, while "cultch" is not sufficiently abundant. When this bed was first seen by Captain Donnan in 1900 the whole area was thickly spread with oysters as well on the sand as on the rock and on the cultch-strewn areas. With every recurrent period of stormy weather these oysters suffered thinning by encroachment and overwash of sand, till eventually they were cleared from off the sandy uncultched areas, and only those left that lay on rocky ground and on sufficiently cultch-covered bottom.

A subsidiary cause of destruction was the ravages of the boring sponge, *Clione indica*, which appeared specially active on this section, riddling the valves and sapping the vitality of the oyster by the drain it causes upon the nacre-secreting glands. Out of 400 individuals examined 310 were affected by *Clione;* less than 23 per cent. were free from the infection.

Apart from this the oysters of the South-West Cheval were the healthiest, the organs being plump and well-developed, whereas a considerable proportion of those from the Mid-West and North-West sections were thin and of poor appearance.

The effects of Overcrowding.—Sand disturbance produced comparatively little numerical reduction upon the North-West and Mid-West sections, these regions possessing more extensive stretches of rocky bottom than any others in this neighbourhood. The reduction was due primarily to the effects of overcrowding, not perhaps so much because of their own numbers, great as they were originally, but rather because of huge deposits of spat in July and December of 1901 along the eastern moiety of these sections, which fell upon the older oysters there present. For the first year the effects were little marked, but little by little as the myriads of newcomers flourished and increased in size the well-being of the older generation was affected, a result that showed itself first by arrest of the growth of the shell, and then later by starvation, lowered powers of reproduction, and widespread mortality.

Regarding the arrest of growth, we note that the older oysters on the Mid-West Cheval measured 69·42 mm. by 64·54 mm. in March, 1902, when they were 2½ to 2¾ years old, while survivors on less thickly populated parts of the bank were but 72·30 mm. by 65·25 mm. in March, 1904, an increase in size of but 4·37 mm. in depth by 2·45 mm. in length in two years, a growth so slight as to justify the conclusion that oysters from the Western Cheval practically attain their maximum length and depth upon reaching the age of three years, increasing thereafter in no appreciable extent save in thickness, which is due to thickening of the valves by deposit of nacre upon the inner surface.

In the case of the Muttuvaratu, the Karaitivu, and the Dutch Moderagam Paars, the disappearance of the oysters has been total, caused not so much by the competition introduced by the presence of myriads of vigorous young, though this also existed, as by the overcrowding set up by their own immense numbers. This had such baneful effect, that when I saw them in March of last year they showed marked deterioration upon their condition four months previously, while their size showed actual decrease in length and depth (58·84 by 54·32 mm. in November, 1902, as against 57·54 by 54·00 mm. in March, 1903).

Again, out of 227 examined, 25 or over 11 per cent. were affected with the "yellow" disease, a malady marking the imminence of widespread mortality.

That the Muttuvaratu oysters should have been entirely cleared away, as against the relatively large number left upon the Western Cheval, is undoubtedly due to stress of overcrowding having been less acute and less widespread in the latter case.

Subsidiary Causes.—The usual general enemies of the pearl oyster were present in their accustomed numbers: starfish, boring molluscs, and the smaller oyster-eating fishes (*Balistes, &c.*). The two former, the starfishes especially, work considerable harm collectively, and their reduction in numbers is one of the benefits to be derived from dredging on a large scale.

The smaller oyster-eating fishes were not excessively numerous upon the Cheval, and are not at present a destructive agency, seeing that the oysters are now too strong and of too large dimensions to be crushed by the small jaws of these fishes. Their ravages are only to be feared when a bank is covered with spat, when these fishes gather from all quarters; if the deposit is limited and the nature of the bottom sufficiently smooth, the attack may involve partial or even entire annihilation. The boring-annelid, *Polydora*, sp., was markedly abundant on the South-West Cheval, but I could trace few fatal effects to its tunnelling.

Far otherwise was it with the inroads of the boring sponge (*Clione*) already alluded to. Hundreds of valves were examined, where not only was the substance of the shell riddled by its honeycomb-like tunnels, but more serious, the insertion scar of the adductor muscle was tuberculated and diseased, due to the inferior power of nacre production of the epidermal layer in this region. So great, indeed, was the nacreous tuberculation in some cases that I have seen the natives save these shells with a view to cutting the tubercles off to use in the manufacture of pearl jewellery.

Whenever the inroads of *Clione* were extensive, the sub-epidermal tissue in particular and the other tissues in general were thin and diseased looking. A fairly large proportion of the dead shells found during the fishery on the South-West Cheval were badly affected; *Clione* must undoubtedly be included among the more destructive agencies with which we have to contend.

There was no evidence of any depradations on the part of rays this year, and so far the destruction of the Periya Paar Karai oysters last year remains unique in my experience.

Rays were several times seen; on the 27th February a large shoal heading south passed the ship at anchor on the North-West Cheval. The sight was a remarkable one, the sea for over twenty yards square being one patchwork of yellow discous bodies.

Fair-sized examples of *Trygon walga* were caught from time to time. None of them furnished direct incriminating evidence, the stomachs being filled with crustacean *débris* and fragments of small lamellibranch shells other than those of the pearl oyster.

Like the trigger-fishes, these smaller rays would appear to find the present size and strength of the oysters too great for the power of their teeth and jaws.

D.—*Condition of Spat on the Periya Paar in 1904.*

March 14 was devoted to an inspection of the Periya Paar, with the result than an immense bed of oyster spat* was there discovered. The young oysters were incredibly abundant, spread densely over an area fully five miles in length by from one mile to one mile and a half in width. The age was under three months, so that they must have been spawned not earlier than December of 1903, more probably towards the end of the month than towards the beginning. Alike on sandy and on rocky ground was this profusion found, but on the rocky ground the numbers were notably greater. On the sandy stretches the oysters formed bunches often of large size, the individuals attached in most cases to one another, but generally having a nuclear fragment of small cultch, which most frequently was a cockle shell, a nullipore ball (*Lithothamnion*), or a small fragment of "paar." The spinning mussel (*Modiola barbata*), "suran" as it is called by the Tamil divers, was in places abundant, especially upon some of the sandy ground, but not sufficient to constitute a grave danger to the bed. This discovery of spat paralleled in extent and nature that made by Professor Herdman in February, 1902, when he estimated approximately the numbers of the young oysters at one hundred thousand millions, and which, it will be remembered, had all disappeared when I next re-examined the bank in November of the same year.

A very remarkable fact was that some of the largest of these young oysters when last seen, 3rd April, had already developing gonads filled with reproductive products fully formed and ready to be shed. The average size of these sexually mature individuals was $25\frac{1}{2}$ by $26\frac{1}{2}$ by 9 mm. The smallest was $24\frac{3}{4}$ by 25 by $8\frac{3}{4}$ mm. The extreme age of these cannot be more than $3\frac{1}{2}$ months, and we are fully warranted in considering that sexual maturity is reached by the pearl oyster soon after the age of three months. Previous to this the age of six months was the earliest at which reproduction had been observed.

Sexual precocity at such a small size and early age, in itself remarkable, has much practical bearing upon the replenishment of the banks from time to time, a subject that will be treated of at another time.

Principal Spawning Seasons.

The gonads of this year's fishable oysters were nearly all in a spent condition during February and March, and this taken in conjunction with the presence of incredible multitudes of very young oysters—so young, indeed, that they could not have been set free earlier than the middle of the December preceding—points to the months of December and January as the period coinciding with one of the two maxima of reproductive activity that characterize the pearl oysters of Ceylon.

In April the gonads began to show sign of increase, and a small quantity of spat was seen. I now believe that the two maxima do not coincide as we at first supposed with the intervals of fine weather and variable winds between the monsoons, *i.e.*, November in the one case, March and April in the other. This year's observations point distinctly to the chief spatting seasons having December and January and June and July as the central periods respectively, a time when the monsoon winds are blowing steadily and strongly. On *a priori* grounds this particular seasonal activity is also indicated, for wide dispersal of the embryos can be more effectually attained during this boisterous period of strong currents than if they were expelled during the inter-monsoon lulls, characterized by light winds and erratic surface drift.

---

* The term "spat" is used in these pages in a wide sense to comprise all sizes of attached oysters under the age of fou months.

When stating this as the general rule it must, however, be borne in mind that there are yet many more or less extensive exceptions; small quantities of young oysters are occasionally met with during other months, but such spat falls are sporadic, and do not invalidate the statement that the pearl oyster has two spawning maxima which centre round midwinter and midsummer respectively.

False Spat.

Very frequently in the history of the pearl banks false hopes of future fisheries have been raised by the appearance on the banks of incalculable myriads of minute molluscan spat found clinging in multitudes to sea weeds and water plants either floating or rooted to the bottom. For long decades these were confounded with the true spat of the oyster, which they resemble closely. Critical examination has proved them to be the young of a small bivalve, *Avicula vexillum*, closely allied to the pearl oyster. Captain Steuart appears to have fallen frequently into the error of confounding this with pearl oyster spat, as he identified some of the *Avicula vexillum* spat when submitted to him after his retirement as being true pearl oyster spat. Mr. H. Sullivan Thomas, in his valuable report to the Madras Government on the pearl fisheries of Tuticorin (1884), went exhaustively into this question, and appropriately termed these minute shells "false spat," in reference to the falsified hopes of a fishery they so frequently gave rise to.

This present season *Avicula vexillum* is extremely abundant, very young stages being found on fine algæ in four to five fathoms west of Karaitivu island, while older stages up to three parts grown were dredged in wonderful abundance clinging to the fronds of *Halophila* on the sandy ground north-east of Aripu reef.

It is interesting to note that the figures purporting to represent oyster spat in Sir Emerson Tennant's "Sketches of the Natural History of Ceylon" in reality depict faithfully the appearance of this "false spat," and are therefore misleading in respect to the true spat of the pearl oyster.

E.—*Prospects of future Fisheries.*

The prospects of a large fishery, both next year and in 1906, upon the Cheval and Moderagam Paars, are excellent; the immense quantities of young, 2 to 2½ years old, occupying the Moderagams, the South-East, South, Mid-West, North-West, and the greater part of the three central blocks of the Cheval Paar been ample for two years' fishery. Those on the Moderagams and on the South, South-East, and South-Central Cheval will, I hope, be fit to fish next March, being more advanced in growth than those on the Mid-West and North-West Cheval. Apart from this reason it will be advisable to fish the former at as early a date as the valuation of samples may show to be profitable, because as many of the oysters on the beds named lie loose in bunches on a sandy bottom, they are thereby exposed to the danger of removal and destruction by currents of exceptionally great force, a contingency infrequent, but not unknown, as instanced by the extraordinary fishery of 1888.* By March of 1905 these oysters will be about 3½ years old, and, judging from the rapidity of their growth and their exceptional large present size, by that date they should be sufficiently matured to give a profitable fishery. They will then be practically of the same age as those of the 1903 fishery, which realized just under Rs. 30 per thousand average price.

If the fishery be postponed till 1906, the pearl yield would be greater, but were this done, supposing the oysters remained in safety till March, 1906, upon the banks, there would then be too great a quantity to fish in one year, and a moiety would be left for the succeeding year 1907. But in 1907 the remainder would be 5½ years old, and under the conditions prevailing on the Western and Median Cheval, where these remaining oysters would be, it is most improbable that they would be then surviving. Definite decision cannot be arrived at till the next valuation has been made in November of the present year.

The oysters at present on the Muttuvaratu and the Dutch Moderagam Paars should also be ready to fish in 1906, but I do not build confidently upon this; even now these oysters are extremely stunted and sickly looking, and are certain to decrease very largely ere ripe to fish.

Beyond 1906 or at latest 1907 there is likely to be a break in the fishery cycle, a more or less prolonged blank cycle, whereof the duration will be largely dependent upon whether or not large measures of transplantation be resorted to, seeing that there has been no fall of spat upon the Cheval, Moderagam, or Muttuvaratu Paars within the last two years, that is to say since June, 1902.

The only other hope lies in the possibility that a younger generation may be growing up on some of the paars that have not been inspected of recent years. I therefore trust that I may be given the opportunity to make exhaustive inspections during the next two years. The more I learn at first-hand about the banks and the more I read of the old records, the more convinced I am that limited and narrow-compassed inspections have been the cause of the loss of many valuable fisheries. To give a concrete instance of the essential need for thorough periodical examinations of the whole pearl-bank area, the following extract from Captain Donnan's report of the 1878 inspection furnishes significant reading:—

> "While inspecting the Cheval I discovered oysters on a new bank, 2¼ miles to the westward of the Cheval, where it has generally been considered that there was nothing but an extensive sandy flat. I saw it recorded in the diary of inspection by Captain Laughton in March, 1802, that he found oysters of four or five years in abundance in nine fathoms rocky bottom, Koodromallai bearing S.E. ¼ E.; and being anxious to test if rocky bottom really existed in that neighbourhood, I took all the inspection boats in tow of the launch out to the verge of the bank of soundings, and directed them to dive all the way back to the inspection vessel; so as to cross the position noted by Captain Laughton, and they came upon rocky ground and oysters, where they placed a buoy. On subsequent examination this bed of oysters proved to be about 1½ mile in its longest direction N.N.W. and S.S.E. and about three-fourths of a mile broad at its broadest part, having a depth of water over it of from 8¼ to 9¼ fathoms and a sandy flat of nine fathoms between it and the Cheval. I believe it to be an extension of the Periya Paar in a S.E. direction. I have duly recorded its position in my diary. The superficial area of the bed is 3,845,935 yards, and the oysters on it average twenty-two to a dive. I estimate the total number of oysters on it at 3½ millions, sufficient to give ten

* Twynam, "Report on the Ceylon Pearl Fisheries," 1900, pp. 9 and 59.

days' fishing for fifty boats with loads of 7,000 oysters each. I found, however, 13 per cent. of dead shells, which is an unfavourable sign, and a large quantity of seaweed growing on the oysters. I have been much puzzled about the age of these oysters, as they appear to be old although of small size. I believe them to be of the description known to the natives as "koddapako," which are said to be a small class of oyster, but rich in pearls. They resemble the oysters of the Chilaw banks, which I know to be four years old now, and therefore they ought to be fit for fishing in March next.

"I can find no record of this bed having ever been inspected since 1802, and it is a curious coincidence (*sic*) that what was then recorded of its condition might be recorded now on its most probably first examination since that time."

The oysters referred to in the above extract were fished the following year, 1879, and the question is at once suggested—how many times between 1802 and 1878, the interval during which this paar received no attention, did oysters mature unknown upon this ground, and, further, how many other oyster-bearing patches have been left in the like neglected state?

The spat upon the Periya Paar will, I fear, vanish during the present south-west monsoon—its all but invariable fate—smothered in sand churned up by the violence of the monsoon seas breaking on this bank, of which the seaward margin forms the edge of the great submarine plateau over which the pearl banks are scattered.

F.—*Pearl Production.*

Parasites of the Pearl Oyster.

Entozoa were plentiful in the oysters fished this year, both nematode worms and encysted cestode larvæ; the former especially were more numerous than I had before seen, and many oysters contained two individuals.

A solitary example of *Aspidogaster* was found; located as usual in the pericardium. Cestode larvæ were particularly abundant in the oysters from the North-West Cheval, and this fact will be referred to again when we come to treat of the relative pearl yield of the three sections.

More light is still needed to enable us to complete our knowledge of the life-history of the pearl inducing parasite, and till I have an opportunity to dissect a number of individuals of the large oyster-eating Sting-Ray, *Trygon uarnak* (Forsk), the *Walwady thirikkai* of the Tamils, there can be no chance to close this important gap in the investigation. No opportunity offered to obtain one of these fishes at the late fishery, my position twelve miles from land precluding access to the fishermen of Pukulam and Marichchikkaddi, the only possible places where I could hope to procure a specimen.

Of *Trygon walga* several small individuals were caught by the inspection boatmen. This species does not however possess teeth sufficiently powerful to destroy oysters more than a few months' old, and no cestode parasites belonging to the species found in the pearl oyster were discovered when these fish were dissected.

Besides pearl oysters, a large number of fishes were dissected in search of the adult stage of the pearl oyster parasite, and such work will form the subject of detailed report in the future.

The Yield and Character of Pearls from different Regions.

During the inspection of the Cheval I collected representative samples of mature oysters from the South-West, Mid-West, and North-West beds respectively. From the 7th to the 9th March I was engaged superintending the washing of these samples and the valuation of the pearls picked out. The results showed that the South-West oysters were the richest in pearls, the North-West following closely, with the Mid-West unmistakably much poorer in yield.

The following table will make clear the relative returns:—

Bed.	Quantity.	Total Weight of Pearls.		Weight per 1,000 Oysters.		Valuation per 1,000 Oysters.	Size of Oysters in Millimetres.
		Kalanchu.	Manchadi.	Kalanchu	Manchadi.		
						Rs. c.	
South-West Cheval.	12,000	7	13·25	—	12·76	36 1	76·20 × 69·20 × 32·34
North-West Cheval.	7,200	2	17·00	—	7·91	33 75	72·67 × 66·50 × 31·50
Mid-West Cheval ...	6,000	2	0·88	—	6·81	20 25	72·30 × 66·50 × 31·57

The weight of pearls per 1,000 was very high in the case of those from the South-West, which fact may be correlated with the size of these oysters being considerably greater than that of the other two lots. In regard to the quality of the pearls, the North-West oysters while yielding a less weight contained a much greater proportion of "cyst pearls" of excellent quality than those from the South-West, which latter owed their greater proportionate weight of pearls to a noteworthy abundance of "muscle pearls."

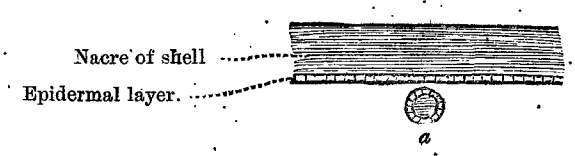
External characteristics give but the most meagre indication of what the pearl yield may be—in regard to "cyst pearls," the abundance or otherwise is connected with the factors which control the relative abundance of the pearl-inducing cestode and those which conduce to its death during encystment in suitable localities within the tissues, problems as yet obscure. The fact is to be noted that dissection showed the oysters from the North-West Cheval to be more extensively infested with cestode cysts than those from the other districts, while the valuation sample showed that cyst-pearls were much more abundant in these oysters than in those from either the Mid-West or South-West Cheval sections.

With regard to muscle pearls, the general fact stands out, deduced from my experience of two fisheries, that the more vigorous and well-grown the oysters may be, the more abundant are the "muscle-pearls."

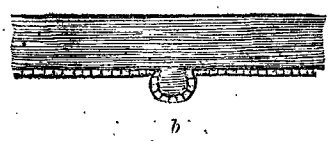
Shell-pearls.

At the close of the inspection, when the valuation samples of oysters had been washed, I seized the unique opportunity thus afforded to examine over 30,000 pairs of separated valves of the pearl oyster. I did this chiefly to see if any considerable proportion of shell-pearls were induced by the irritation caused by perforation of the shell by boring parasites,—sponges, lamellibranch molluscs, and annelids. The result negatived this supposition and showed that these animals have little influence upon pearl production; the sponge, *Cliona indica*, causes occasional roughening or even rugged tuberculation at the insertion scar of the adductor muscle, and the annelid, *Polydora*, may produce an occasional discoloured internal excrescence, usually sharp-pointed; more rarely a parasitic nematode, free or encysted, is cemented to the nacre and sealed up in a pearly sarcophagus.

By far the larger number of shell-pearls, fully 90 per cent. of the whole number, are due to the attachment of cyst- and muscle-pearls to the nacreous lining of the shell, consequent upon rupture of the pearl-forming sac upon the outer aspect as well as of the epidermal layer beyond, which is intercalated between the nacreous inner surface of the valve and the pearl sac. This rupture of the tissues is due to the pressure exerted by the pearl as it increases in size, producing primarily a thinning of the containing membranes on the side where resistance is felt, a tenuity which gives way at last placing the pearl in actual contact with the nacre and converting its closed pearl-secreting sac into a pouch-shaped pocket or ampulla, the open neck directed outwards and in continuity with the general epidermal layer upon the exterior surface of the mantle. The process is shown in the following two diagrams :—



a.—A cyst-pearl lying free in the sub-epidermal layer of the mantle.



b.—The same pearl become attached to the nacre of the shell.

Shell-pearls originating in this manner are at first pedunculated, and at this stage may be detached readily. Little by little the peduncle tends to become obiliterated, and eventually the pearl may be entirely lost in the substance of the shell nacre.

Shell-pearls are in many cases affixed without definite order or arrangement. Examples may be located anywhere, the largest however being usually either in the peripheral region of the nacre, or in the central region, where the position corresponds with the lateral surface of the visceral mass. Such irregularly disposed pearls are usually found single. Smaller attached pearls are not infrequently located either singly or in a serial line of from two to five along the pallial line, each pearl coinciding in position with a muscle scar. Very rarely small ones may be seen along the edge of the adductor muscle scar.

Most frequent of all are pearl masses of irregular or even botryoidal form attached at or adjacent to the levator insertions. (Pl., 9 fig. E.)

Decalcification of the pearls attached to muscle scars reveals no organic nuclei, whereas the pearls irregularly disposed have cestode embryos as nuclei, exactly as "fine" pearls have.

Examination of these 30,000 shells gives therefore strong confirmatory evidence in support of the theory set forth by Professor Herdman and myself, associating such pearls as have no nuclei—cestode or other platyhelminthian embryos—with the attachment surfaces of those muscles which have insertion on the shell, especially the small and comparatively weak levator and pallial muscles.

Figs. A to D, Pl. 9, are very instructive in showing the perfect way in which the positions of the shell-pearls there depicted coincide with series of pallial muscle scars.

G.—*Demarcation of the Cheval Paar Region.*

Division into Eleven Sections.

I have definitely adopted in the present report that system of nomenclature for the different sections of the Cheval Paar which I proposed to, and which has been approved by Professor Herdman. Besides being a present convenience, adherence to a fixed and carefully thought out scheme of nomenclature, coupled with properly defined limits to the sections, will go far to obviate vitiation of inference both in current work and in the historical deductions that will be made in future years by succeeding Inspectors. The sketch plan herewith will form a permanent record of the method of subdivision adopted in the case of the Cheval Paar, the largest and by far the most important of our pearl banks.

I have subdivided this paar into three divisions, the Western, Median, and Eastern. The Western comprises the South-West, Mid-West, and North-West sections or blocks; the Median the South, South-Central, Central, and North-Central; while the Eastern also consists of four subdivisions named respectively the South-East, Mid-East, North-East, and North. The Periya Paar Karai may be said to be a continuation to the N.N.W. of the last named, while the northern limit of the North Moderagam Paar marches with the southern edge of the South-East Cheval.

Each division, and well-nigh each section, has distinctive physical and faunistic characteristics. The Western, save in the South-West section, is essentially a rocky bed; the Median is almost entirely a level sand plain; the Eastern partakes of both characters, patches of rock and of sand being intermingled in all proportions.

The South-West, the South, and South-East have much in common, consisting of a rocky framework more or less hidden beneath a layer of sand varying from a few inches to a couple of feet in thickness, with flat-surfaced rocky patches, level with the general surface, here and there. In a good many places an abundance of cultch—dead shells, dead coral, nullipore balls, and small fragments of calcrete—compensates for the scarcity of rocky surfaces, but there are many localities where the

cultch is insufficient, and which therefore bear fewer oysters than they would be capable of bearing if effective cultching operations were carried out. Oysters grown upon these sections mature earlier than those on the other sections.

Sand living molluscs, *Mactra*, *Cardium*, and *Venus*, are abundant, with small isolated coral colonies, chiefly Astræids, and fair numbers of the small *Fungia dentata*, a coral that lives free upon the surface of the sand. The black crests of *Spongionella nigra* are very common objects here.

The Mid-West and North-West sections, being abundantly rocky, bear many fixed corals, especially *Turbinaria cinerascens*, bushy but isolated Madrepores, large Astræids, and some *Porites*. Very characteristic is the Kudai-sponge, *Phyllospongia holdsworthi*, which this year, as usual, was common on the valves of the oysters from the Mid-West section. Nearly as common upon the oyster valves were pretty branched colonies of *Madrepora*. *Cidaris*, *Antedon*, and the spicule-bearing Ascidian, *Rhabdocynthia rosea*, are other characteristic organisms.

The Eastern division has fewer distinctive faunistic features, the most characteristic being the magnificent Hydroid Zoophyte, *Campanularia juncea*. On the eastern margin of the Mid-East rosy arborescent Pennatulids are abundant, rooted in the sand.

Comparison of the relative Natural Importance of the Eleven Sections judged by Historical and Biological Data.

Now that cultivation of the pearl banks is to be taken in hand systematically, it is essential to know the relative natural "fertility" of the different sections, *i.e.*, their relative capacity for the successful maturing of spat falling thereon.

Two methods of ascertaining this information exist, the historical and the physico-biological. The former is based upon the information contained in the diaries and reports of former Inspectors of the Pearl Banks, the latter upon the data obtained from the dredging and diving operations carried out during the last two years and a half.

Taking the historical evidence first, we may summarize the facts in the following tabulation obtained and verified by a detailed search through the voluminous records of past fisheries, namely:—

Table showing the Fisheries held since 1820 on the different Sections of the Cheval Paar Region.

North-West Cheval.	Mid-West Cheval.	South-West Cheval.	South Cheval.	South-East Cheval.	Mid-East Cheval.	North-East Cheval.	North Cheval.	North-Central Cheval.	Central Cheval.	Moderagam.	Periya Paar Karai.
1833	1831	1855	1829	1836*	1837*	1835*	1833	1833	1835*	1828 (N. & S.)	1835
1835	1859	1863*	1830	1837*	1888	1887*	1835*	1835*	1836	1836 (N.)*	1836
1881	1874	1888	1836*	1877	1903	1888*	1887	1857	1857	1859 (N.)	1903
1888	1880	1904	1837*	1888	—	1903	1903	—	1859	1860 (N. & S.)	—
1904	1888	—	1858	1903	—	—	—	—	1888*	1877 (N.)	—
—	1904	—	1863	—	—	—	—	—	—	1887 (N.)*	—
—	—	—	1877	—	—	—	—	—	—	1888 (N. & S.)	—
—	—	—	1888	—	—	—	—			—	—
5	6	3½	7	4	2½	2½	3½	2½	4	6	3

* Indicates that the fishery in such year was partial, either upon a small portion of the area of the section or that a fishery of the same brood of oysters was held on the same region in successive years, *e.g.*, 1880 and 1881, on the Mid-West. These are counted as "half-fisheries."

Comparison of the total number of fisheries held on the respective sections shows the marked superiority of the Moderagams and the South Cheval to all the others; next in value appear the North-West and the Mid-West with the South-West, the North and South-East following closely. None of the others have been fished more than three times within the last eighty-four years.

In seeking for the reason of the marked superiority shown by certain of the above regions we will tabulate the principal general physical characteristics of the bottom, and see what light this sheds upon the problem :—

Character of Bottom.		Typical of the undernoted Sections.
Rocky	...	North-West and Mid-West Cheval.
Sandy without much cultch	...	South-Central, Centeral, and North-Central Cheval.
Sandy with fair abundance of cultch	...	South and South-East Cheval and North Moderagam.
Mixed rocky and sandy bottom with variable proportions of cultch	...	South Moderagam, South-West, North-East, North-Central, and Mid-East Cheval and the Periya Paar Karai.

From this, considered with relation to the evidence furnished by history, it appears that the ground upon which oysters have most frequently matured are (*a*) sandy bottom where cultch is most abundant (*e.g.*, South Cheval and North Moderagam); (*b*) bottom characterized by long stretches of rock surface, with a minimum of sand (*e.g.*, North-West and Mid-West Cheval). The worst bottom is, as seen, the sandy North-Central, Central, and South Central regions, where cultch is not widely distributed, and the mixed ground (rock and sand) on the North-East and Mid-East Cheval. In the case of the two latter localities cultch is scarce on the sand, and in the earlier part of last century inspection here was not thorough.

Such conclusions agree generally with those we arrive at if we examine the matter from the biological standpoint and which have been stated elsewhere, namely, that a wholly rocky bottom, other things being equal, will accommodate a larger spat fall than sandy areas, but that if the surface of the latter be well supplied with loose fragments of dead coral, shells, nullipore balls, and calcrete, such will mature a larger quantity of oysters than the rocky bed. And, again, the size attained by the oysters on the well-cultched sandy region will, in a given time, much outdistance that of those upon rock. Oysters from rocky ground are particularly liable to die off about the age of three years, a calamity due to the effects of overcrowding reaching a maximum of pernicious effect at that period.

More definite deductions we cannot at present attempt on account of the great variety and complexity of the other conditions which affect the presence and maturing of oysters upon particular regions. Thus, while certain localities may appear and may actually be better adapted than others for the growth and well-being of oysters, they may, in spite of this, yield fewer fisheries than ground which is decidedly less favourable, the reason being that the interaction of the spat-bearing currents may drift the spat away from the more favourable grounds and thus endow a worse locality with the more frequent spat falls, the favourable ground being denied the seed that is needful to produce the rich harvest which it is capable of producing.

II.—Cultivation of the Pearl Banks.

History of the Proposal to Transplant Spat at the 1904 Fishery.

Transplantation of spat with the subsidiary operations which it entails is admittedly the most important cultural means at our disposal for increasing the harvest of the pearl banks, and to make good any deficiency in spat fall upon the favourable paars.

As noted elsewhere, no fall of oyster spat has occurred upon the Cheval and Moderagam Paars during the last two years, and it therefore behoves us to endeavour to make good the shortcomings of Nature by employing artificial means to stock these paars with a fresh supply of oysters, unless we be content to endure frequent series of lean years in our coming fishery records.

With this transplantation scheme in view I took an early opportunity to prospect upon the Periya Paar for young oysters, experience and the historical records of the banks having shown this to be the ground where occur the richest and most frequent falls of spat. My hopes were amply fulfilled in the discovery on the 14th March of a huge bed extending north and south fully five miles and varying in breadth from one mile to one mile and a half. Everywhere the bed was densely covered with pearl oysters less than three months old. The conditions for dredging them up could not have been better, vast numbers lying on sand in densely crowded clusters and bunches. Such an enormous abundance of spat afforded the requisite material for transplantation, and as the history of this bank shows conclusively that oysters do not mature here oftener than once in a century, and but few even then, there can be no hesitation to exploit this supply to the utmost of our power—to remove the largest possible quantity that by any means we can compass, to the end that ground more suitable for the maturing of oysters may be enriched.

The East and North-East Cheval having been fished clear of oysters last year, and being ground proper for maturing purposes, I proposed to Government that sanction should be accorded me to utilize the dredger "Ready" for one month from the 1st April to transplant spat from the Periya Paar to the Eastern Cheval. This proposal was duly sanctioned, as was also one to obtain a large quantity of cultch.

Among other preparations I inspected a likely area on the East Cheval and laid down on the selected ground a set of five mark buoys for the guidance of the Master of the "Ready" when engaged upon the distribution of the dredged spat.

Unfortunately for my carefully thought out plans the dredger by reason of rough weather was able to put in but two days and a half at this spat dredging prior to 9th April, on which date I received instructions to place the "Ready" at Mr. Dixon's disposal for the purpose of dredging mature oysters. When the vessel reverted to me some time later continuous bad weather had set in, rendering it impossible to work upon the exposed Periya Paar. As a consequence I had to cancel the cultching arrangements, and transplanting operations are in consequence postponed probably for an entire year.

With regard to the future of transplantation I can but endorse Professor Herdman's reiterated statement, that *in this lies the true salvation of the pearl fishery*. This being so, if Government approves of such recommendation, it will be absolutely necessary in order to ensure success to give me both permission to arrange for and carry out an extensive programme of transplantation and cultching and to provide me with adequate means for the purpose—that is to say, I should have a dredging steamer at my disposal from the very date of finding young oysters fit for transplanting, and *this steamer should be devoted solely to this work for the whole of the fine weather available and suitable for dredging*. Only by transplantation on the greatest possible scale can success be assured. We have to remember the largeness of the object in view and the huge profit to be made—nothing less than the formation of a bed of oysters of sufficient extent to allow for extensive wastage due to a dozen different causes, and after such wastage to give a fishery of mature oysters calculable in millions.

It is but an obvious truism to say that great results cannot be obtained by the employment of trivial means. To form a bed of oysters that will yield, say, ten millions at a fishery four to five years hence necessitates effort on a commensurate scale.

Necessity for extensive Cultching.

It has already been shown (Section I., A and G) that the sections of the Cheval and Moderagam Paars giving the finest oysters and the most valuable pearl yield are those possessing a well-cultched sandy surface, with somewhat restricted rocky outcrops. Unfortunately such areas are comparatively limited in extent, and the major part of the Cheval—the North, North-East, Mid-East, and part of the South-East and South-West with all the three Central sections—consists of sandy bottom inadequately supplied with material suitable to serve as foothold to oysters.

Many of the oyster grounds cultivated in Europe and America suffer from a like shortcoming; artificial cultching has accordingly been resorted to in order to make good the deficiency. As showing the importance attaching to this remedy, I may mention that at Whitstable three days in each week are given over to cultching and transplanting, and also four hours of each other day.* Hundreds of tons of shells and rubble are utilized for this form of bed surface improvement, oyster farmers willingly paying from 2*s.* 6*d.* to 3*s.* per ton for suitable material.

Again, in France the fishery laws provide that during the dredging of a productive bed all shells, gravel, stones, &c., shall be thrown back on the bottom.†

We now have sufficient knowledge of our own local conditions to see that transplantation must go hand in hand with extensive cultching, if we are to obtain a full return for the labour and money expended on the former operation—indeed, we may go further and say that the transplantation of young

* "Report of Commission appointed to inquire into the methods of Oyster Culture," Dublin, 1870, p. 37.
† *Loc. cit.*, p. 61.

pearl oysters will be labour wasted, unless adequate cultching operations be carried out concurrently. Appreciation of the vital importance of this fact caused me to apply for authority to obtain several hundred tons of broken rubble for cultching purposes as soon as transplantation was seen to be advisable last March. The proposal was at once sanctioned, and while waiting to begin transplanting I arranged by the kindness of the Public Works Department for the preparation of a trial shipment of 100 tons of broken calcareous sandstone from Kalpitiya. The stone was to be roughly broken to the size of the fist, roughly 3½ by 3½ by 2½ inches. The full quantity had been prepared when the transplanting scheme was arrested, and now lies ready for shipment whenever it be next required.

The Comparative Value of Cultch Materials.

The quantity of cultch needful to cause an appreciable improvement over a considerable area is so great that it is necessary to weigh very carefully the effectiveness of various materials in order to ascertain which is the most truly economical. The ideal cultch material is undoubtedly broken tiles; their shape keeps them from readily sinking into the sand, their non-calcareous composition furnishes no opportunity to the boring sponge, *Cliona*, to extend its evil activity, while lastly, their slightly rough surface is excellently adapted for the attachment of the swimming spat when the time arrives for it to settle to the bottom.

The calcareous sandstone of Kalpitiya already referred to probably comes next, its advantages being comparative lightness, a rough surface, and slight liability to damage by the attacks of lime-boring animals, composed as it is of coarse quartz grit interstitially cemented by carbonate of lime.

Oyster and other shells form another good material, and one that Nature avails herself of largely. On the South and South-East Cheval old valves of pearl oysters, cockles, and other lamellibranchs give foothold to hundreds of thousands of oysters.

Gneiss and schist are less suitable materials than the three above-named, their heavy weight involving a danger of untimely burial in the sand should it be of any depth.

Regarding the question of price, the quotation given me for the Kalpitiya stone was Rs. 3·75 per ton delivered on the pearl banks, half going in preparation and cartage, the other half in boat freight. Considering the lightness of the stone, which means that it will spread over a considerably greater area than would the same weight of gneiss, this price appears satisfactory, and it is also probable that this quotation may be reduced, if material be required regularly.

On the other hand, shell cultch goes three or four times as far as the lightest form of stone cultch on account of the thinness of its substance, and while it has less lasting qualities than the latter, being liable to corrosion by the acids in sea water and to damage by the honeycombing of *Cliona*, yet whenever good prices cannot be obtained for the pearl oyster shells accumulated during a fishery the best purpose they can be put to is to be relaid upon the pearl banks during transplantation. I calculate that at the very lowest estimate one ton of shells will furnish as much cultch as three tons of Kalpitiya stone or rubble. As this quantity of the latter costs Rs. 11·25 (3 tons at Rs. 3·75 per ton), I believe that it will be more economical for Government to refuse to sell the shells at any less price than Rs. 10 per ton, and to use them as cultch unless this minimum price be obtained.

On European and American oyster grounds it is the universal practice to return all dead shells to the sea when dredging over oyster banks, care being taken to part the two valves before throwing them overboard, this having the effect of doubling the surface of the cultch available for the attachment of spat. In some places cockle-shells have been utilized with advantage to cultch oyster beds.

Clean Banks essential to successful Cultivation.

In this as in the matter of cultching we may with the greatest advantage profit by the experience of European oyster-culturists, who find it absolutely necessary to check the growth of all organisms upon the banks other than oysters. Not only must those that are active enemies of the oyster, starfishes, whelks, and the like, be destroyed, but also those animals that curtail the area which oysters may occupy, and which also consume food that would otherwise fall to the oysters. Sea weeds, too, are ruthlessly weeded out. As a consequence much of the oystermen's time is taken up in cleaning the beds by means of the dredge. If the beds are in preparation to receive spat, all harmful matter is taken ashore—starfish, whelks, mussels, and the thousand and one animals that may be termed the passive enemies of the oyster—where they find a ready sale as manure. Sea weeds share the same fate, while all solid material that is overgrown with any form of life is regarded as "foul" and laid out on the beach to be cleansed and bleached by the combined influences of sunshine and rain.

Fortunately the Ceylon pearl banks are comparatively clean. No fact struck me so forcibly when first I began to make diving descents than the obvious paucity of life on the better quality of oyster-bearing paars. Wherever oysters were found thriving, wherever they were seen in vigorous growth and perfect health, the bank appeared typically a comparatively dreary waste of sand, bearing clumps of oysters here and there on little patches of flat-surfaced rock or upon fragments of "cultch," with an occasional sponge or small coral at intervals that were few and far between.

Where "foul" areas are found, *i.e.*, where sponges, corals, alcyonarians, echinoderms, and ascidians abound, as on many parts of the Western Cheval and Muttuvaratu Paars, the oysters, while numerous enough, are stunted and poor, suffering by competition with the host of creatures living upon the same diet of microscopical organisms.

The only means to clean a bed is to dredge it thoroughly, separating and treating the materials brought up in the way above described.

In Ceylon the beds are too extensive to permit of dredging being undertaken with this sole object in view, but as this cleansing can and should go on concurrently with the dredging of spat for transplantation or of mature oysters for sale, we have herein one of the chief arguments in favour of taking up dredging on a scale of considerable magnitude. Sight should never be lost of the fact that dredging has four-fold utility, namely, (*a*) fishing oysters, (*b*) cleaning the ground and removing enemies, (*c*) in thinning out overcrowded beds, and (*d*) spat transplantation. Its value is not properly assessed if account be taken of the first item alone, or even of the first and the last.

Every live coral removed and replaced by a fragment of clean cultch may mean the addition of three oysters at the next fishery; every starfish destroyed *does* mean scores of oysters saved from destruction; every *Cliona*-riddled block of coral bleached on the shore will tend to reduce the widespread havoc this inconspicuous sponge causes amongst the oysters. The immense advantage

that accrues from keeping the banks in a state of thorough cleanliness can well be appreciated by an agriculturist who knows how his crops fall off if weeds be allowed to run riot unchecked, if fungoid and insect pests be ignored, if the soil be never disturbed, and if sun and air be excluded therefrom.

The Importance of thinning out Overcrowded Beds.

The evil effects attendant upon the overcrowding of the oysters which so often takes place upon certain of the Ceylon banks have already been laid stress upon, and, I think, sufficiently demonstrated. The remedy already suggested by Professor Herdman consists of thinning out at suitable time. The dredge again is the only remedial agent. Thinning out, transplantation, and cleaning the bank may all proceed conjointly—the thinned out oysters being deposited on unoccupied ground, while the foreign organisms and the cultch materials will be taken ashore, the former to be destroyed, the latter to be bleached.

The Activity of Young Pearl Oysters.

The activity of the pearl oyster during the first six or even twelve months of its existence is very noteworthy. Several instances are given in Professor Herdman's report (pp. 68 and 87), but more remarkable observations than any of those there recorded were made during my inspection of the Tuticorin banks in May last, when on the two occasions when we anchored on the Tholayiram Paar young oysters were found attached to the anchor chain when this was subsequently hove up. In one case, 3rd May, eighteen oysters were picked off from the chain at the anchor end. All were found between the butt of the anchor and a point ten feet up, just where the chain would occasionally rest upon the bottom. The oysters were of the youngest age of those upon the bank, none more than six weeks or two months old. A fortnight later the experience was repeated when we again anchored on this paar, five oysters two months old being found adhering each by several byssal strands to the chain links near the anchor. In both cases the anchor had been down for eighteen hours.

The effects of this restless activity are two-fold: it gives a younger generation great advantage over an older in the struggle for existence, the young ones mounting on the topmost parts of the older ones and intercepting food particles which otherwise would pass to the latter; it aids them also in finding elevated places of refuge when an influx or disturbance of sand occurs.

This advantage of superior activity accounts largely for the diminution and eventual effacement of a bed of old oysters when invaded by myriads of a younger generation as seen this year in the case of the eastern region of the North-West and Mid-West Cheval Paar.

III.—Physical and Meteorological Observations.

During the whole time of my sojourn on the pearl banks, from 19th February to 19th April a continuous record of the temperature and density of the surface water of the sea was kept, observations being taken thrice daily, together with particulars of wind and surface drift.

The same instruments were employed as during the cruises of the "Lady Havelock" in 1902. While these are sufficiently accurate to enable comparisons to be instituted with sufficient approximate accuracy for ordinary purposes, it is advisable, now that the management of the pearl banks is under scientific control, that the present instruments be replaced by others of standard pattern and accurate correction. A special thermometer to ascertain the temperature on the sea bottom should also be obtained; a good barometer is a further desideratum.

Specific Gravity and Temperature of the Sea on the Pearl Banks.

During my stay on the pearl banks the sea temperature at 7.30 A.M., from 81° F. on 20th February and 80° F. on 26th February, rose with occasional slight irregularities to 86½° F. on 19th April, the last day observations were taken upon the banks.

At noon the lowest temperature recorded was 82° F., at which it remained steady from 22nd February to the end of that month. During the early part of March it rose rapidly until the 11th, when it stood at 86½° F. It remained at and between 85° to 86½° F. till 19th April.

The temperature of the sea taken at 5.30 P.M. ranged from 84° to 81° F. during February, rising in March to 85° F. with occasional variations, never more than 1½°. It remained steady at 86° F. during April.

On the Tuticorin banks the temperature of the sea for the first half of May ranged from 88½° to 91° F. at noon, the latter the highest temperature reached and similar to the maximum temperature recorded by Thurston at Rameswaram in July, 1888.*

At 7.30 A.M. the sea temperature ranged off the Indian coast from 87° to 89° F. and at 5 P.M. from 88° to 90° F., the 4th May seeing the maximum with 91° F. at noon and 90° F. at 5.30 P.M.

On the Ceylon banks the total range in temperature from 19th February to 19th April was but 7° F., from 80° F. on the 26th February to 87° F. on 5th April, a range almost identical with the lowest and highest temperatures recorded in 1903, namely, 80¾° to 84¾° F. in February; 83° to 86½° F. in March; 86° to 88° F. in April; a total rise of 7¼° F. during this period.

The *specific gravity* of the water was constant at 1·0236 on the Cheval Paar during February falling towards the end of March to nearly 1·0230, between which figure and 1·0232 it hovered during April, the variation being due largely, if not entirely, to the alterations in the temperature experienced during this month.

On the Indian banks, where the temperature ran up to 91° F., the average specific gravity was 1·0228.

A corresponding record of the temperature of the air in the shade was kept. At 7.30 A.M. the air temperature from 76° F. on 22nd February, rose to 79½° F. on the 29th, and thereafter moved upwards with slight irregularities to 84° F. on the 31st March, attaining the maximum for this hour at 80 F. on the 17th, 18th, and 19th April.

The lowest noontide temperature was recorded at 82 F. on 22nd February, rising to 88° F. on 29th March. During April it remained steadily between 85½° and 87° F.

From 83° F. at 5.30 P.M. on the 19th February the shade temperature rose to 86° F. at this hour on the 31st March and remained within 1° F. of this till we left the banks on the 19th April.

---

* "Rameswaram Island and Fauna of the Gulf of Mannar:" Madras Government Bulletin No. 3. Madras, 1895, p. 85.

On the Indian banks the heat was most exhausting during the early part of May, the highest reading being on the 4th of that month, when as much as 94½° F. was registered at 5.30 P.M., a temperature higher than of noon, which was 92° F.

The Weather during the Fishery.

Excellent weather prevailed from the day I left Colombo to the date of beginning the inspection (22nd February), light land and sea breezes alternating morning and afternoon. From 22nd February to 1st March, inclusive, strong north-east winds blew continuously, raising a heavy sea and rendering the work of inspection difficult. On 2nd March typical fishery weather set in, characterized by a breeze from the south-east in the early morning, veering round gradually by the southward to the west by noon, and then on to the north-west in the afternoon—an arrangement admirably suited to the sailing requirements of the diving fleet, which was thus enabled to run out to the fishing grounds with a fair wind in the early morning and to return to the camp in the afternoon with an equally favourable following wind. From about 11 A.M. to noon a dead calm usually prevailed and marked the time of greatest activity in diving work. Early in the evening during this period the wind worked round to the north-east, and later to the east, finally veering to the south-east, where it remained for some hours after daybreak.

Unfortunately the spell of fishing weather was of short duration this year, ending as it did on 30th March.

The following morning broke fine, with a placid sea, perfect conditions for fishing. By 3 P.M. heavy monsoonish clouds banked up to the south-west, and the wind, instead of changing to the usual north-west sea breeze, increased in force from the south-west, raising a rough and ugly sea.

The weather remained variable during the first four days of April, but with a heavy swell from the south-west running continuously accompanied by a strong northerly current, the wind ranging from south to south-west.

The south-west swell made diving distinctly difficult on the twentieth day of the fishery (5th April), and continued with monsoonish vigour thereafter until the close of the fishery, which indeed it directly brought about.

After 4th April the weather was so continuously boisterous, the sea running so high, that from that date onwards only three days were sufficiently calm to permit of dredging by the method adopted by the Dredging Master. Under these circumstances the divers deserve the utmost credit for their perseverance in the face of danger and discomfort. Had they not been keen to work the fishery would have come to a premature end on 7th April by reason of bad weather. As it was it was continued off and on for a further thirteen days beyond the commencement of unfavourable conditions of sea and wind.

Two points of interest were noted in connection with the beginning of the bad weather: the one that the phase of full moon on the evening of 31st March synchronized with the change from fine to bad weather; the second that the next day, 1st April, when, the unfavourable conditions intensified, rain squalls—the only ones experienced during my stay on the pearl banks—occurred from 8 to 9 P.M.

A Phosphorescent Phenomenon.

On the evenings of 9th, 10th, 11th, and 12th April, when at anchor on the Western Cheval, we beheld a repetition of the strange phosphorescent phenomenon witnessed by Professor Herdman on 13th March, 1902. The display began at about the same hour each evening, varying from 8.45 to 9.30 P.M., the sea being dotted with large isolated flashing lights that pulsated and vanished ghost-like at regular and frequent intervals.

The rhythmic and progressive blotting out and rekindling of these phosphorescent fires were as if the sea were swept by regularly recurring searchlight rays. The beginning of each successive light wave appeared to lie to the south; the intervals were approximately of two seconds' duration.

All the four nights were dark, but the weather was variable, one night tempestuous, another fairly calm; a fairly strong swell prevailing the whole time.

The displays lasted approximately for an hour each evening. The cause remains undetermined.

Trichodesmian Calm.

During several days in March vast quantities of the red-brown scum of *Trichodesmium erythræum* lay profuse and filthy upon the surface of the sea. So abundant was this scum that twice did it extend the period of noontide calm, acting precisely as a film of oil does. At midday when the first puffs of the sea breeze came out of the north-west, while the breeze was evident enough otherwise, yet it failed for some time to disturb the surface where lay this scum. Where it was absent or where the progress of the launch broke a lane through the film, the wind raised ripples and wavelets, which little by little spread and encroached upon the *Trichodesmian* calm. This with the gradual freshening of the wind scattered the particles, driving them downwards.

Surface Drift.

Nothing can be done towards the solution of this question without the employment of bottle drifters, except to note the direction of the current from day to day when at anchor on the banks.

This was attended to from 19th February to 19th April, the result being to show that during February the current set in the main to the south and to the south-west in dependence upon the general direction of the wind at this period, which was mostly north-east.

The following month, March, distinguished for its alternate land and sea breezes, showed a to and fro motion of the water upon the banks, the current altering with every change of wind and never attaining any degree of strength.

In April, consequent upon the continuous south-west wind and swell, the current ran strongly northwards, frequently at a rate of from two to three knots per hour.

IV.—RECOMMENDATIONS.

Improved and extended inspection necessary.—The uncertainty as to where oyster spat may fall and subsequently mature, so well brought out by examination of the table on page 9 for the Cheval and Moderagam region, holds good in even greater degree of the southern banks.

There the Muttuvaratu Paar, lost sight of for at least two centuries, gave three consecutive fisheries of great value in 1889–1891, the Chilaw Paar gave fisheries in 1803 and 1884, the Kurukkuppanai Paar in 1815 and again in 1884, while the banks off Karaitivu gave returns in 1832, 1890, and 1891. Judging by past experience the probability amounts to a certainty that beds of oysters have repeatedly been missed and fisheries lost through imperfect and restricted inspection, through want of good landmarks and from lack of acquaintance with the biological characteristics of the bottom. It is not enough to survey accurately the regions or paars where oysters are most frequently found as shown by the case of the "koddeipakku" region of the Periya Paar in 1878* and that of the Muttuvaratu Paar in 1889-91.† Banks not commonly considered fertile may be so occasionally, and therefore wherever the biological and physical features of the ground do not preclude absolutely the growth of oysters, inspection should be made with scrupulous care at the very least once in every three years. On the other hand, time has, I know, been wasted—unwittingly—in the past upon the inspection of banks where the biological factors preclude the maturing of oysters. I recommend therefore that such so-called "oyster paars"—for example, the Anaivilundan and Naddakuda Paars of Captain Donnan's chart—should be ignored. At present, while we know many of these hopelessly unprofitable paars, the work of assessing the oyster potentialities of many of the smaller banks is not complete, and this is one of the duties which the Marine Biologist has to undertake and advise upon. To enable good work to be done, reliable charts, conspicuous landmarks, the best of instruments, and picked and experienced assistants are necessary,

Fairly satisfactory charts of the pearl bank region we have, thanks to the care and foresight displayed by Captain Donnan, and when I shall have completed the detailed biological survey of the bottom from Aripu to Negombo, which I have already begun, I propose to incorporate such data in a series of revised charts, showing (*a*) the areas where rock, well cultched sand, and bare sand respectively preponderate; (*b*) contour outlines of the localities capable of maturing oysters and the regions where spat-falls occur.

Landmarks.—This subject has already been treated of at length, the conclusion being reached that a beacon on Aripu coral reef is the most urgent present need, together with the raising of Kutiramalai trigonometrical tower.

Instruments.—The ss. "Ready," if employed again, should be supplied with a reliable and properly adjusted compass as well for the safety of the ship as for the accuracy of the work to be done. A barometer is also urgently required for the use of the Inspector, together with a set of tested thermometers, including one for taking temperature on the sea bottom.

Cultural Requirements.—The chief requirement needful to give permanent prosperity to the pearling industry consists of a scheme of transplantation upon a liberal scale, the oysters relaid having an ample supply of cultch provided whereto they may attach. This with careful cleaning of the ground from active and passive enemies during dredging for transplantation and for market, and with judicious thinning out when inspection shows a bed to be overcrowded, summarize the main points.

Transplantation.—When a bed of oysters of suitable age for transplanting be discovered the necessary quantities may be obtained in either of two ways: by dredging or by utilizing native divers. At present we have no data whereby to compare these two methods financially.

In any case no divers would be obtainable whenever a fishery might take place coincidently with the need for transplantation, while they have ever shown reluctance to work during November because of the chilliness of the atmosphere and of the sea at that period. Hence dredging appears the sole practicable means at our disposal whereon reliance may be placed.

The best time to carry on transplantation is during February, March, and April, that being the period when we have the longest spell of good dredging weather. This, too, is the time when the probability of finding suitable young oysters is greatest, as has been proved repeatedly, instance the Periya Paar in March, 1902 and 1904.

In November the chance of finding oysters in a suitable position relatively to the ground where they are to be relaid is less, and the available extent of fine weather is so short and uncertain that the work of a single steamer would be, I fear, insufficient to give any adequate results. I consider that one steamer continuously employed for twenty-six working days is the minimum that will produce a useful return for the labour and money expended.

What I recommend may be summarized as follows:—

That preparations on a liberal scale be made for carrying out a very extensive transplantation of young oysters during February, March, and April next year, if suitable oysters be found. The Inspector should be allowed to spend the first few days of his inspection in January—say from 25th to 30th January—in searching for a bed of spat or young oysters within a radius of 20 miles from the Eastern Cheval.

A steamer fitted specially for dredging and trawling should be ready to take up the work immediately, should the required discovery be made, in which case this steamer should be devoted wholly to such operations—on no account or pretext should the dredging be interrupted by detachment from this service even temporarily; only by incessant labour will it be possible for one steamer to do an adequate amount of transplantation, and any interruption while fine weather lasts would in all probability entail utter failure with consequent waste of the money spent. Only by continuous work during every available day of fine weather, all too brief, can success be attained.

This consideration of the difficulty which a single steamer employed upon transplantation will experience in getting through an adequate amount of work in the necessarily limited time available makes me reluctant to advise transplantation at the November inspection. The weather then is noted for its uncertainty, and I am none too hopeful of having at that time a continuance of dredging weather lasting for the twenty-six days which I consider the minimum of usefulness.

On the other hand, if the oyster spat which was present in incredible abundance on the Periya Paar last March survive through the south-west monsoon, the oysters will be almost a year old in November next, and will be many times more valuable and suitable for forming a new bed of oysters on the Cheval than had they been moved in the stage of spat (under three months old). Therefore,

---

* *Ut supra*, page 6.

† It is however by no means certain that this paar is not fairly fertile, as till Captain Donnan re-discovered it we have no information regarding its previous history under European control.

every day's work during November would be ultimately of great financial importance to the pearl fishery revenue of future years. If work be done in November it would be resumed and amplified in the February following, for the oysters having survived the dangerous south-west monsoon period might be relied upon to live till the spring.

I recommend that a steamer fitted for dredging and trawling be got ready to accompany me when I set out to inspect the beds in October next, and, if young oysters be found, that it be employed wholly upon transplantation duties so long as the weather will permit.

Should no transplanting be done, the steamer need not remain idle; it may be employed in the experimental dredging of mature oysters, the thinning out of overcrowded beds of young, or in aiding in the inspection of the banks by running dredging traverses over the southern banks which have not been examined since November, 1902. The dredger's time would in no way be wasted: I can always find more useful work than there would be opportunity to complete.

A second steamer would be required for the purpose of towing the inspection barque from place to place and for the laying out and taking up of buoys.

Cultching.—The question of cultching should receive early consideration, in view of the many preparations that become necessary if a large scheme of transplantation be authorized eventually. In such case a further supply of cultch should be at once got ready, say a total of 300 tons inclusive of the 100 tons of rubble now piled at Kalpitiya jetty. If possible a portion of this quantity should consist of broken tiles, in order to test the respective advantages of this material as against rubble.

As I do not care however, to recommend the preparation of the further 200 tons till it be known if there be oysters to transplant, I should have permission to utilize 500 tons of oyster shells left from the last two fisheries at Marichchikkaddi, pending the preparation of the rubble and tiles. With 500 tons of shells and 300 tons of rubble and tiles, after the lapse of a year we would be able to judge by experience whether it be more economical to sell or to relay the shells. Meanwhile I strongly urge the inadvisability of disposing of the present stock of shells at a lower price than Rs. 10 per ton.

The Pearl-inducing Cestode.—The Marine Biologist should be given opportunity to further investigate the life of the spherical cestode so abundant in the pearl oyster, and which is the inducing agency in the formation of cyst-pearls ("fine pearls"). The problem is far from solution, and will entail much unpleasant and trying labour before a satisfactory conclusion can be hoped for.

During inspection and fishery the Marine Biologist has no opportunity to obtain specimens of the larger predatory fishes, and I recommend therefore that he be allowed several weeks at Negombo or other likely large fishing station for the purpose of procuring and dissecting specimens of all animals there available which are likely to throw light upon this important problem.

Surface Drift Investigation.—The importance of an accurate knowledge of the movement of the water over the pearl banks has already been urged repeatedly by Professor Herdman. I can add nothing to what he has said, save to say that the more intimate my knowledge of the banks becomes, the more important does this investigation appear. Without this knowledge we cannot form even an approximately accurate idea of the source whence comes the spat that from time to time replenishes one or other of our banks. So long as we are in the dark upon this subject, we cannot define in what location a reserve of oysters should be maintained to produce the most useful results. There must be banks so situated as to be normally of no breeding value, of no importance in replenishing the banks which are our reliance; conversely, certain banks must be of supreme importance in the conservation of our beds, and it is obvious that information on these points is of vital importance in the farming of the banks. We want to know also whether we owe any proportion of the spat that settles on the Cheval to the oyster banks on the Indian side of the Gulf of Mannar; whether we supply any part of their spat; or, again, whether there be mutual interchange.

The plan offering the greatest advantages is to obtain the co-operation of the Madras Government in order to secure both uniformity of method and mutual assistance in carrying out this investigation. I recommend that batches of small sealed bottles, each containing a post card inscribed in English, Tamil, and Sinhalese, be thrown into the sea at intervals and places yet to be determined on both the Indian and the Ceylon side of the Gulf of Mannar, and that small rewards be given to those finders who place the cards in the hands of the nearest revenue officer or native headman, who would despatch them to me with particulars of the date and place of recovery.

After investigation on these lines has been carried out systematically for two or three years, it will become possible to determine the place of origin of much of the oyster spat, and we will be enabled to trace the course of its wanderings while in the larval swimming condition, and in consequence know where to conserve breeding reserves of oysters for the further replenishment of the banks.

Suggested establishment of a Chank Fishery.—On the Tinnevelly and Madura coasts a chank fishery of considerable profit to the Madras Government is carried on annually. I have no particulars of the revenue obtained of recent years, but during the seven years ending May, 1883, a nett profit of Rs. 124,677 was earned, an average annual return of Rs. 17,725.*

In Ceylon, while a large chank fishery employing a large body of divers exists north of Mannar and round the coasts of the Jaffna peninsula as far as Mullaittivu on the north-east coast, the law† forbids any fishery for chanks, bêche-de-mer, or coral on the pearl banks between Mannar and Kalpitiya, an enactment based upon the apprehension that such a fishery would encourage poaching on the oyster banks and militate against the well-being of the banks.

Sir William Twynam states‡ that this prohibition came into force about 1832; prior thereto chank fishing did take place in the neighbourhood of Aripu and Silavaturai, the district which was appropriately termed the "fishery coast" in Portuguese times.

During the recent fishery I saw many chanks both in the shallows at Aripu and at Pukulam. They were also dredged in deeper water—three to six fathoms—in the same districts, of good size and healthy condition.

To prohibit fishing *in toto* appears to me a needless waste of the resources of the Colony; ample safeguards can be provided against abuses in this instance.

---

* H. Sullivan Thomas's "Report on Pearl Fisheries and Chank Fisheries 1884." Madras, 1884.

† Ordinance No. 18 of 1890.

‡ "Report on the Ceylon Pearl Fisheries," Colombo, 1900. page 21.

I therefore submit for the consideration of Government the question of the amendment of Ordinance No. 18 of 1890 in the following particulars, namely :—

(*a*) That fishing for chanks, bêche-de-mer, and coral be permitted at such seasons and in such places between Mannar and Tallaivilla as the Marine Biologist may recommend to Government from year to year; that this permission be granted only during those seasons when no mature (fishable) pearl oysters be present upon the banks in the vicinity, notice of the limits of time and place to be published as soon as possible after the completion of the inspection of pearl banks in November of each year.

(*b*) That the fishing be carried out under Government control, the Government to license a certain number of boats and to buy the chanks fished at a fixed price after the manner adopted at Tuticorin.

The provision that chank fishing be not carried on when mature oysters are present in quantity would be no hardship on any men settled on the fishery coast for this purpose, seeing that if mature oysters be present a pearl fishery will ensue during the only weather suitable for diving, and at which these men would be employed more profitably than they would in chank fishing. This plan, if adopted, would probably induce some of the Kilakarai Moormen to settle permanently at Marichchikkaddi or at Aripu, and, as Sir William Twynam says, "lead to the training of a body of Ceylon divers, whose services would be available at a pearl fishery, while the profits on the sale of the chanks would go far towards paying the expenses incurred on account of inspecting and guarding the banks."*

In the same report Sir William Twynam states that "the difficulty experienced in fishing the banks during recent fisheries (arose), in a great measure, from want of a sufficient number of divers."

The closing of the proposed chank fishery in pearling years would have the effect of supplying a close season for the chanks, working automatically, and would result in keeping up the quality as well as the quantity of these shells.

If the proposal be eventually approved a great deal could be done by the Marine Biologist to increase the supply of chanks, principally by collecting the egg-capsules and hatching the young out in roughly constructed tanks, where protection would be afforded till it became necessary to establish them in suitable places along the coast.

Withdrawal of the prohibition to fish for bêche-de-mer would also be of advantage, and if this were done a small item of revenue might accrue from those so frequently dredged up by the Government steamer. There are places as on the Vankali Paar where from twenty to thirty fine specimens are dredged up in nearly every haul, and, considering the good prices obtainable for this delicacy, it were a pity to see these returned to the sea, as the law as it stands now compels.

Synopsis of Recommendations.

(*a*) Improved and extended inspection.

(*b*) The provision of a beacon on Aripu reef and the improvement of Kutiramalai tower.

(*c*) Transplantation on an extensive scale by means of steam dredging whenever blank spaces occur upon the Cheval coincident with the presence of young oysters in the neighbourhood, within a radius of 20 miles.

(*d*) Cultching to go on concurrently with transplantation. If these operations can be carried out within the next twelve months, 500 tons of oyster shells and 300 tons of Kalpitiya stone to be provided for this purpose.

(*e*) The thinning out of overcrowded beds by means of the dredge.

(*f*) The cleaning of the oyster banks by means of the same agency.

(*g*) Further investigation of the life-history of the pearl-inducing cestode.

(*h*) A series of drift bottle experiments in conjunction with the Madras Presidency officials.

(*i*) The establishment of a chank fishery on Government account and under Government management in the neighbourhood of the Aripu pearl banks.

JAMES HORNELL, F.L.S.,
Marine Biologist to the Government of Ceylon
and Inspector of Pearl Banks.

---

* "Report on the Pearl Fishery of 1881" (Sessional Paper No. XI. of 1881).

APPENDIX.

I.—*Tables of the Dimensions of Representative Oysters examined.*

(*a*) Measurement of Oysters aged $4\frac{1}{4}$ to $4\frac{3}{4}$ years, South-West Cheval Paar, Southern Edge.

Date: March 3, 1904.

No.	Depth in Millimetres.	Length in Millimetres.	Breadth in Millimetres.
1	80	73	34
2	78	69	31
3	80	76	35
4	85	73	35·50
5	67	61	25
6	81	75	35
7	80	71	31
8	76	68	34·50
9	75	71	33
10	90	83	35·50
11	78	75	35·50
12	69	62	30
13	69	61	37
14	76	68	32
15	73	67	28
16	75	66	30
17	76	67	30·50
18	70	69	31
19	80	71	32·50
20	81	70	33·50
21	73	68	33·50
22	79	78	31
23	67	59	31·50
24	70	60	30·50
25	77	69	32
	1,905	1,730	808

Average, 76·20 mm. by 69·20 mm. by 32·32 mm.

(*b*) Measurement of Oysters aged $4\frac{1}{4}$ to $4\frac{7}{8}$ years. North-West Cheval Paar.

Date: February 28, 1904.

No.	Depth in Millimetres.	Length in Millimetres.	Breadth in Millimetres.
1	78	70	32
2	80	68	32
3	75	75	30
4	85	70	33
5	78	70	27
6	70	63	31
7	76	73	34
8	67	58	30
9	68	60	32
10	68	63	30
11	70	65	34
12	73	70	36
13	70	63	27
14	68	65	29
15	67	63	29
16	72	68	32
17	73	68	32
18	76	74	32
19	70	60	35
20	75	65	31
21	78	65	32
22	69	63	31
23	68	63	30
24	70	64	30
25	80	76	34
26	66	63	32
27	68	59	31
28	82	78	34
29	81	65	34
30	65	68	31
	2,186	1,995	947

Average, 72·87 mm. by 66·50 mm. by 31·57 mm.

(*c*) Measurement of Oysters aged 2¼ to 2½ years, South Moderagam Paar.

Date : March 5, 1904.

No.	Depth in Millimetres.	Length in Millimetres.	Breadth in Millimetres.
1	65	60	29
2	67	59	27
3	58	58	26·50
4	69	65	26
5	78	73	31·50
6	73	64	25·50
7	70	69	29
8	65	58	25·50
9	72	69	28·50
10	67	65	26
11	67	63	27
12	77	69	27
13	64	60	26
14	63	59	28
15	69	63	28
16	68	67	28
17	62	58	26
18	73	72	29
19	82	79	30
20	69	59	24
21	69	65	27
22	61	53	26
23	70	68	28
24	69	60	26·50
25	70	69	27
	1,717	1,604	682

Average, 68·68 mm. by 64·16 mm. by 27·28 mm.

(*d*) Measurement of Oysters aged 2¼ to 2½ years, Mid-West Cheval Paar.

Date : March 1, 1904.

No.	Depth in Millimetres.	Length in Millimetres.	Breadth in Millimetres.
1	66	58	26
2	55	53	23
3	58	55	27
4	57	54	25
5	51	46	23
6	58	51	27
7	51	51	22·50
8	60	54	26·50
9	55	50	25
10	56	52	26
11	53	48	21·50
12	60	58	24
13	60	57	26
14	60	55	23
15	58	56	25
16	50	46	22·50
17	46	44	23·50
18	57	52	22·50
19	59	53	23
20	57	52	24
21	58	49	25
22	55	54	26
23	56	51	26
24	61	57	25
25	58	59	26
	1,415	1,315	614

Average, 56·60 mm. by 52·60 mm. by 24·56 mm.

(*e*) Measurement of Oysters aged 2¼ to 2½ years, North-West Cheval Paar.

Date : February 28, 1904.

No.	Depth in Millimetres.	Length in Millimetres.	Breadth in Millimetres.
1	60	55	22
2	63	57	23·50
3	61	60	25·50
4	61	58	23
5	60	61	25
6	59	55	22
7	63	60	25
8	61	60	23·50
9	56	56	23
10	60	57	24
11	53	55	19·50
12	60	55	24
13	58	56	21
14	64	59	24
15	55	50	20
16	66	66	25
17	67	65	23
18	61	55	23
19	67	58	27
20	63	55	26
21	64	60	25
22	59	53	22
23	64	58	23
24	60	58	29
25	60	57	23
26	58	56	23
27	65	58	25
28	65	56	24
29	60	53	21
30	67	60	27
	1,840	1,722	711

Average, 61·33 mm. by 57·40 mm. by 23·70 mm.

(*f*) Measurement of Oysters aged 2¼ to 2½ years, Dutch Moderagam Paar.

Date : March 12, 1904.

No.	Depth in Millimetres.	Length in Millimetres.	Breadth in Millimetres.
1	57	52	23
2	57	52	21·50
3	64	58	24
4	66	59	24·50
5	52	50	22
6	56	50	22·50
7	54	49	22
8	50	47	22·50
9	53	48	22
10	62	56	29
11	65	64	29·50
12	62	52	28
13	67	63	32
14	56	54	23
15	55	50	22·50
16	55	51	24·50
17	58	55	25
18	57	53	25
19	57	50	24
20	67	56	31
21	60	55	26·50
22	62	56	30·50
23	60	56	26·50
24	57	53	26·50
25	60	54	28 50
	1,469	1,343	636

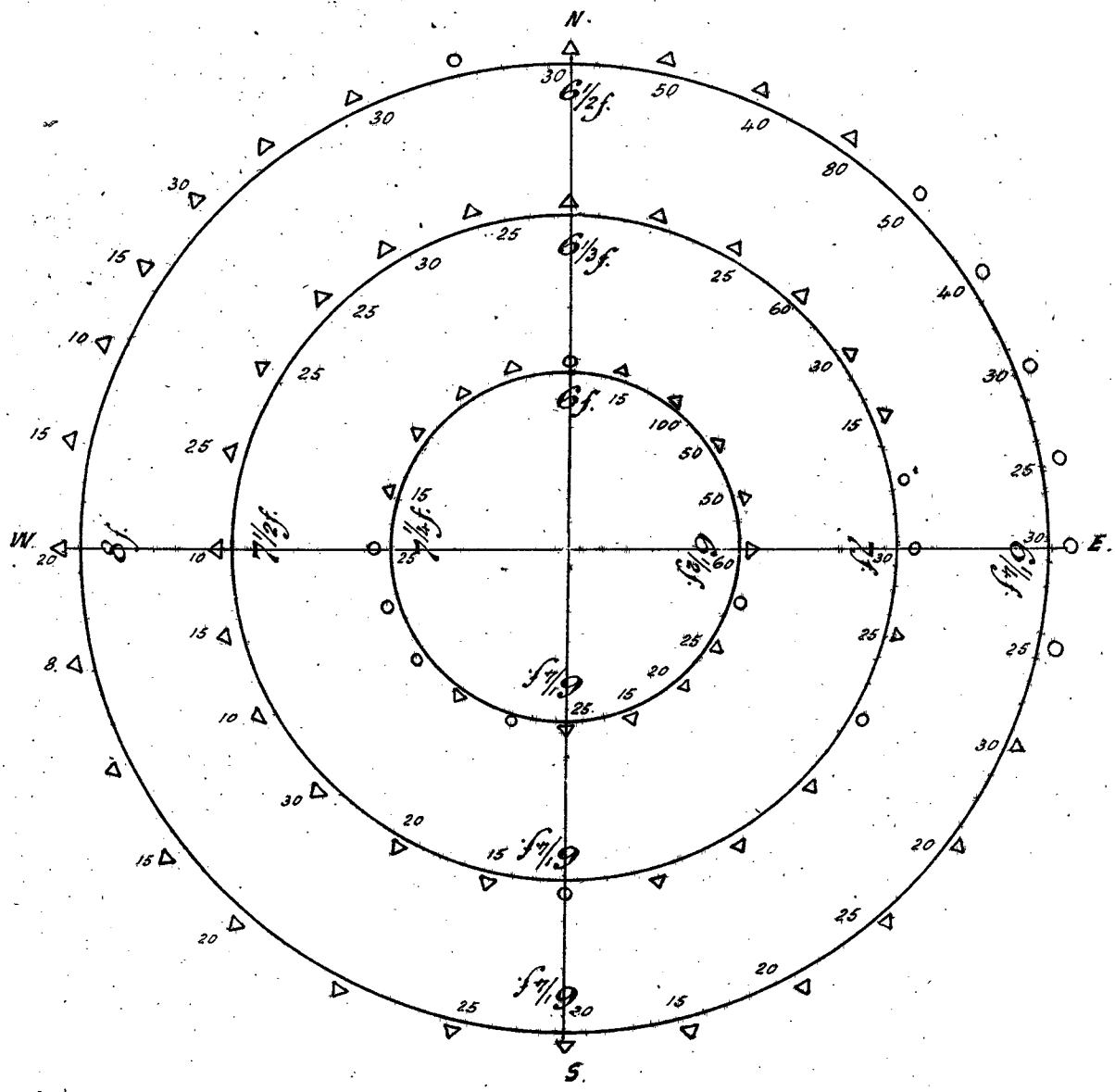
Average, 58·76 mm. by 53·72 mm. by 25·44 mm.

No. 1.

Mid West Cheval Paar,

No. of Boat.....4.....

Date.....25th February, 1904



Numbers above the line indicate Old Oysters.
—„— below —„—„— „— Young Oysters.
△ indicates flat rock.
× —„— Oysters too young to count.
○ —„— a sandy bottom.

S.G.O. No. 124/04

No. 2

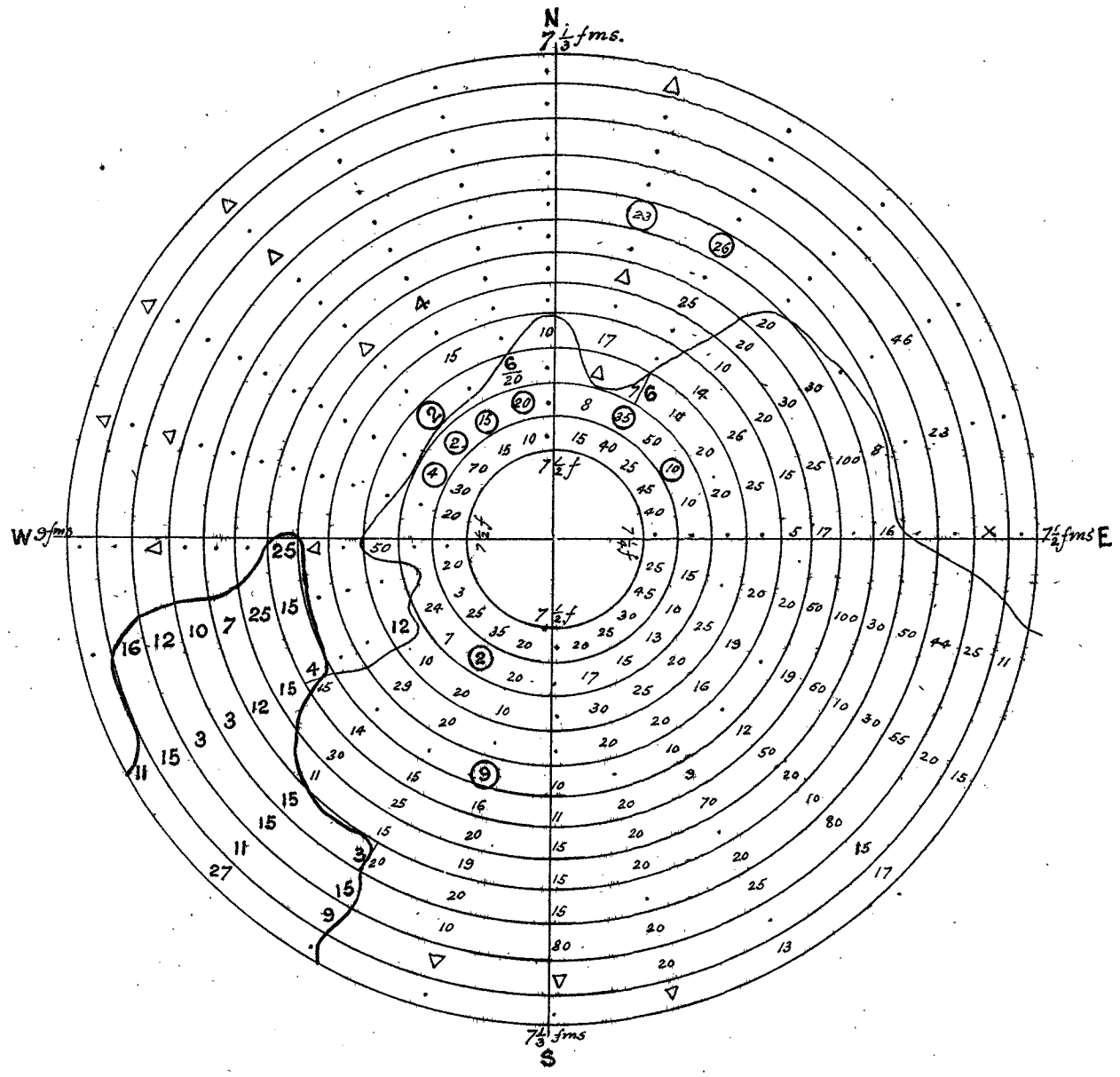
Date 27th and 28th February 1904. N.W. Cheval Paar.

Bearings of landmarks from centre are :-

.....

.....

.....



24. Numbers indicate Old Oysters.....
12. Numbers indicate Young Oysters..... } Upon Rock when the figures stand alone
X indicates Oysters too young to count... } Upon Sand when contained within a circle
Δ indicates that the bottom is flat rock
. " a sandy bottom ..... } When Oysters are wanting.

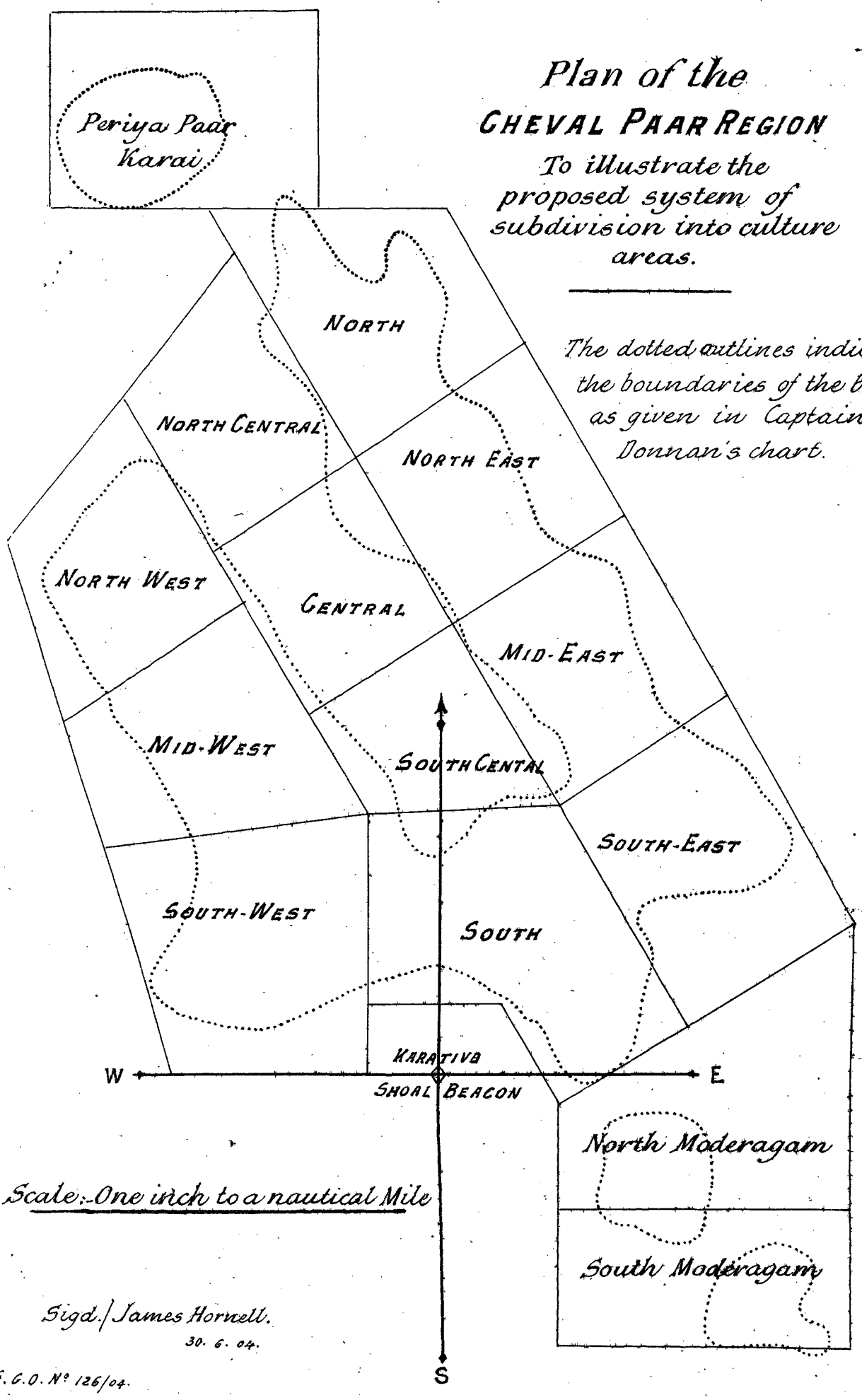
S.G.O. No 125/04.

No. 3

Plan of the CHEVAL PAAR REGION

To illustrate the proposed system of subdivision into culture areas.

The dotted outlines indicate the boundaries of the banks as given in Captain Donnan's chart.



Scale:- One inch to a nautical Mile

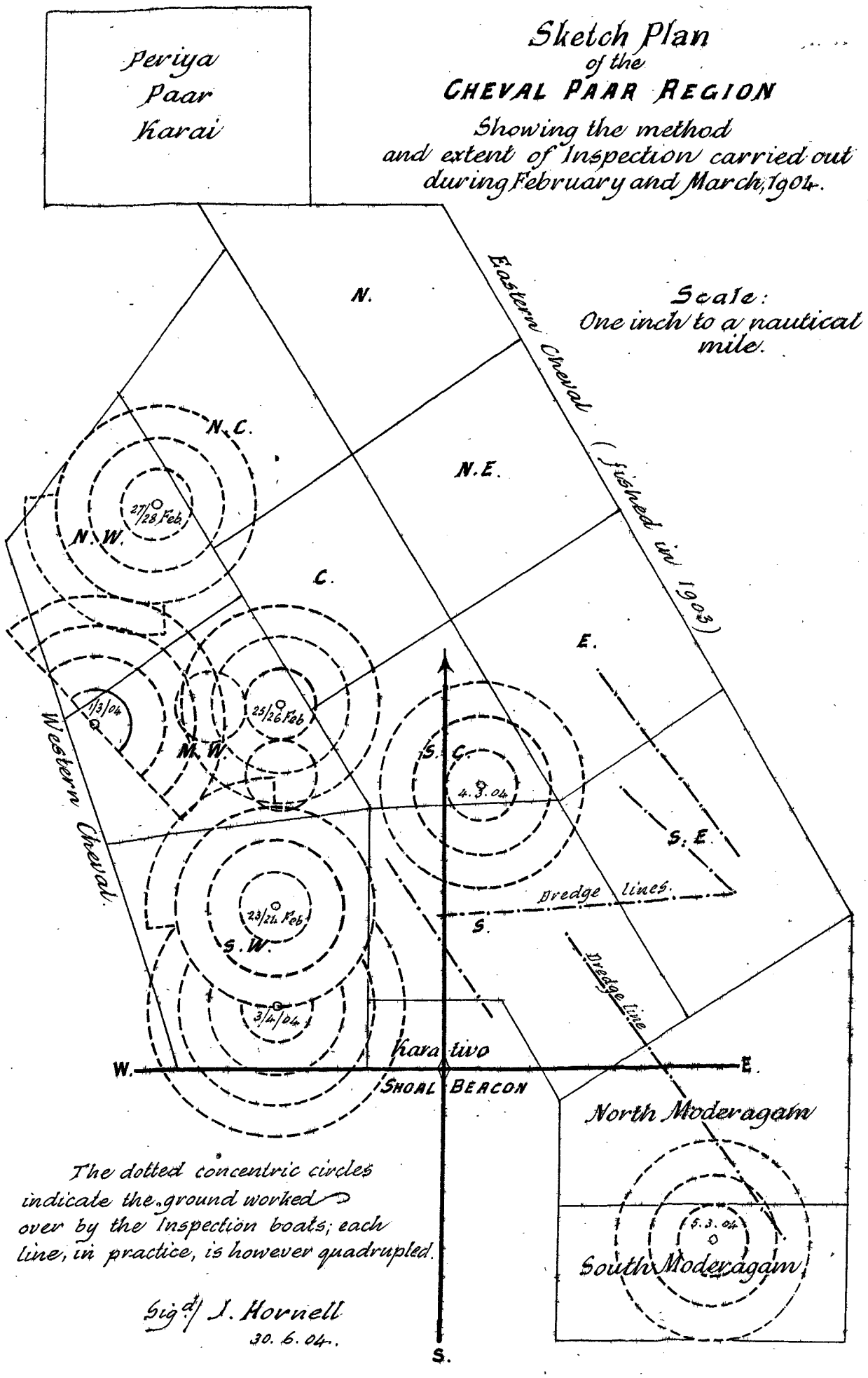
Sigd./ James Hornell.
30. 6. 04.

S. C. O. Nº 126/04.

No. 4.

Sketch Plan
of the
CHEVAL PAAR REGION

Showing the method and extent of Inspection carried out during February and March, 1904.



Scale: One inch to a nautical mile.

The dotted concentric circles indicate the ground worked over by the Inspection boats; each line, in practice, is however quadrupled.

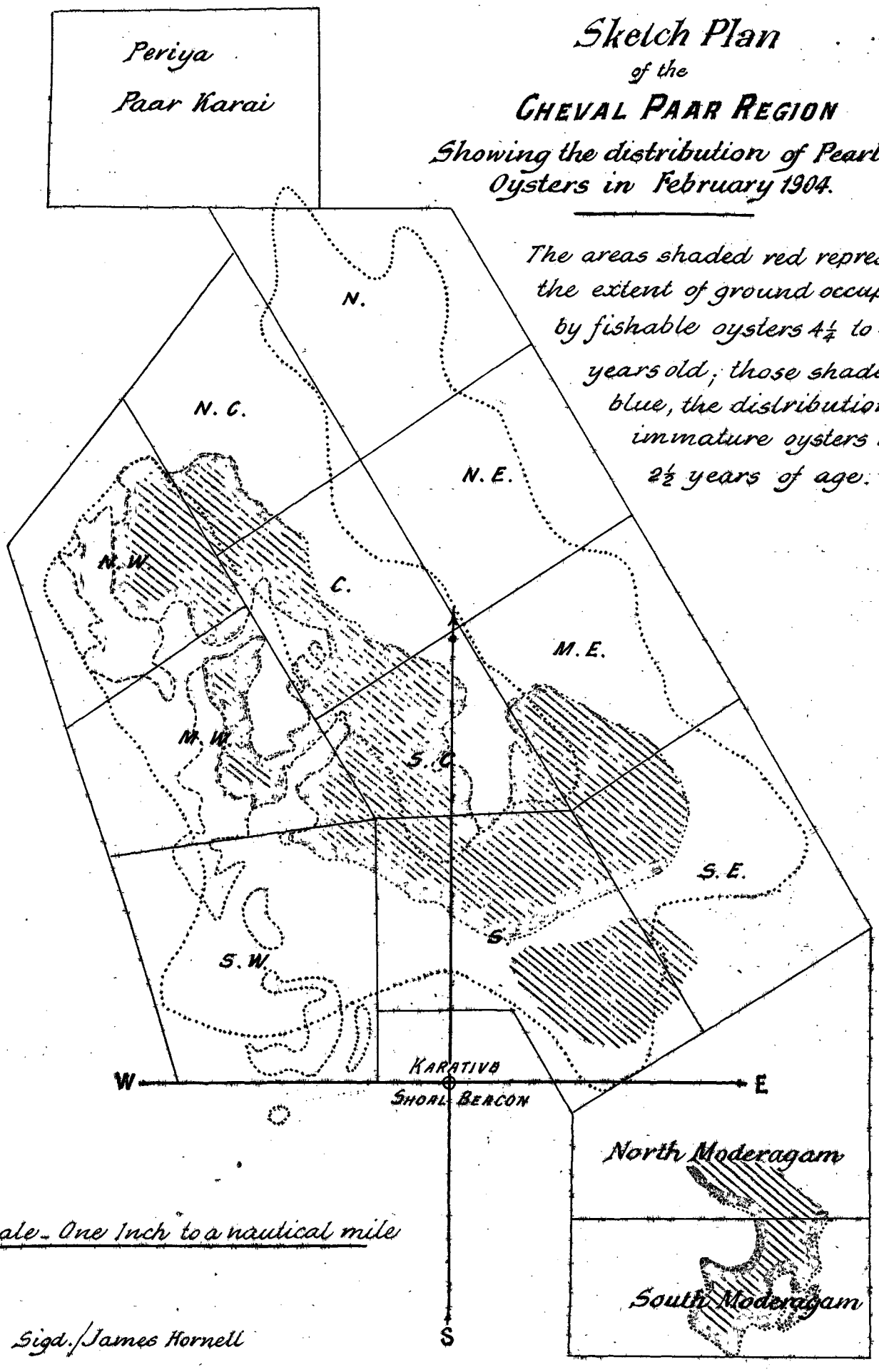
Sig.d/ J. Hornell
30. 6. 04.

S.G.O. No. 127/04

No. 5.

Sketch Plan
of the
CHEVAL PAAR REGION
Showing the distribution of Pearl Oysters in February 1904.

The areas shaded red represent the extent of ground occupied by fishable oysters 4¼ to 4¾ years old; those shaded in blue, the distribution of immature oysters about 2½ years of age.



Scale - One Inch to a nautical mile

Sigd./James Hornell

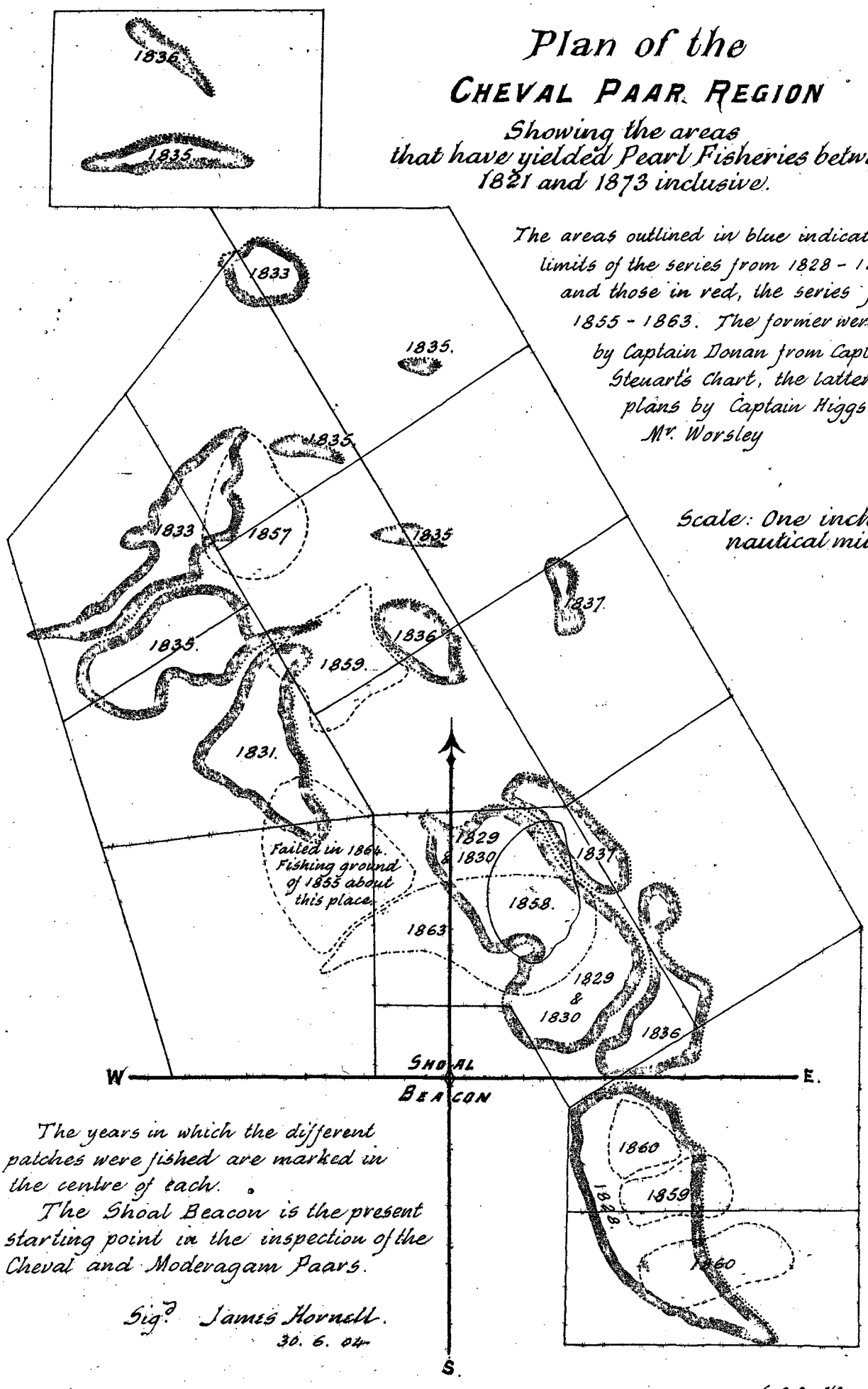
S.G.O. No 128/04.

No. 6.

Plan of the
CHEVAL PAAR REGION
Showing the areas that have yielded Pearl Fisheries between 1821 and 1873 inclusive.

The areas outlined in blue indicate the limits of the series from 1828 - 1837, and those in red, the series from 1855 - 1863. The former were plotted by Captain Donan from Captain Steuart's Chart, the latter from plans by Captain Higgs and Mr. Worsley

Scale: One inch to a nautical mile.



The years in which the different patches were fished are marked in the centre of each.

The Shoal Beacon is the present starting point in the inspection of the Cheval and Moderagam Paars.

Sig.d James Hornell.
30. 6. 04.

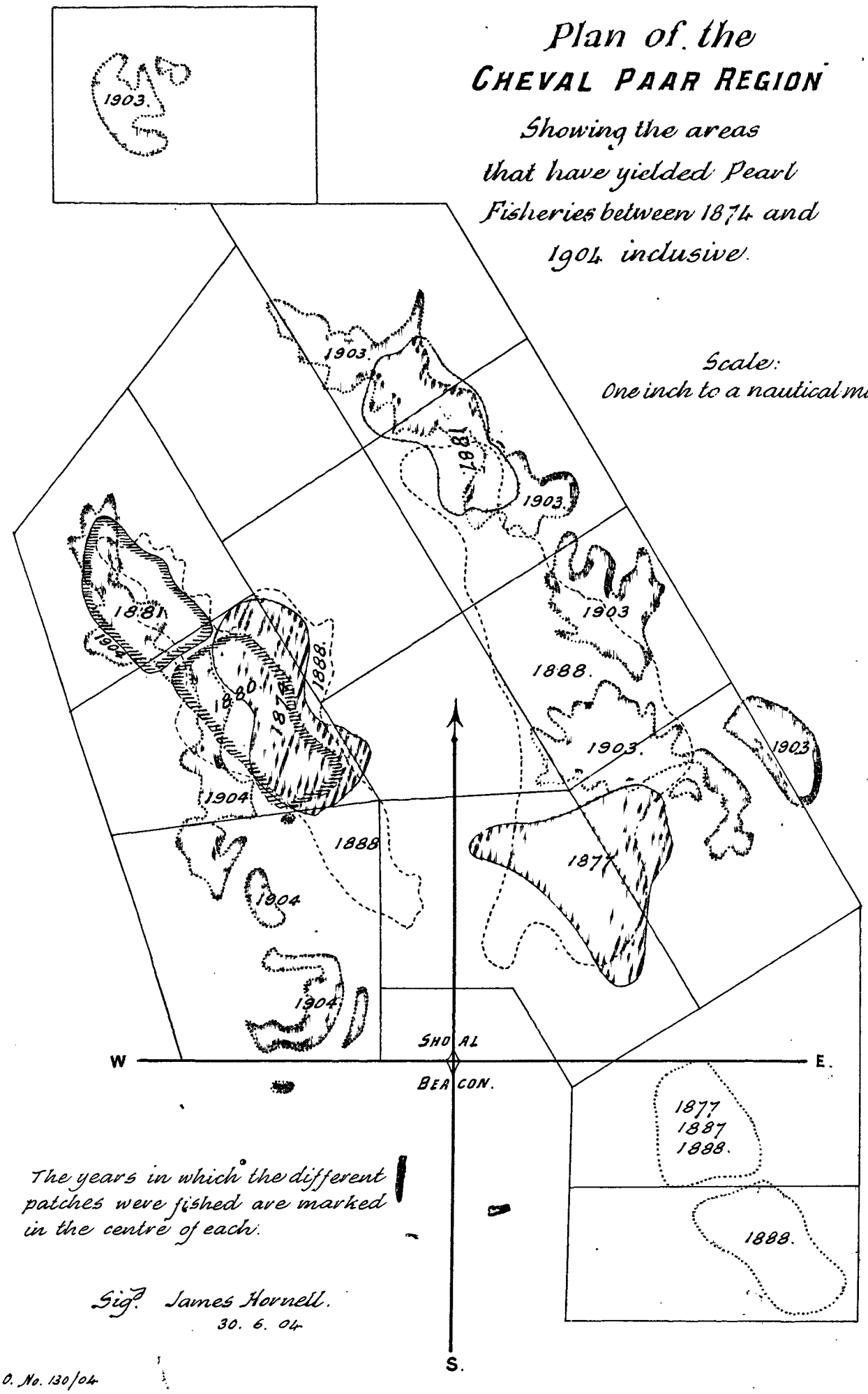
S.G.O. No. 129/04

No. 7.

Plan of the CHEVAL PAAR REGION

Showing the areas that have yielded Pearl Fisheries between 1874 and 1904 inclusive.

Scale:
One inch to a nautical mile.



The years in which the different patches were fished are marked in the centre of each.

Sig.d James Hornell.
30. 6. 04

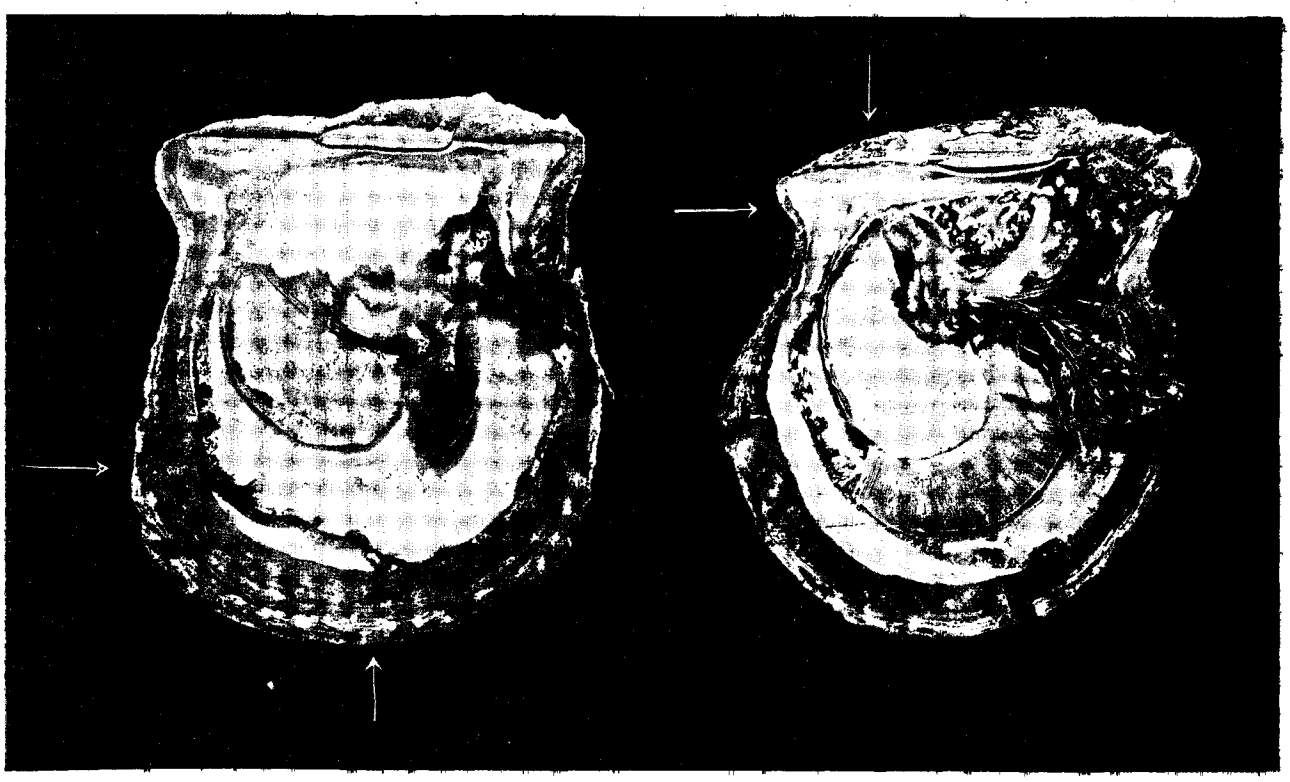
S.G.O. No. 130/04

No. 8.

A.

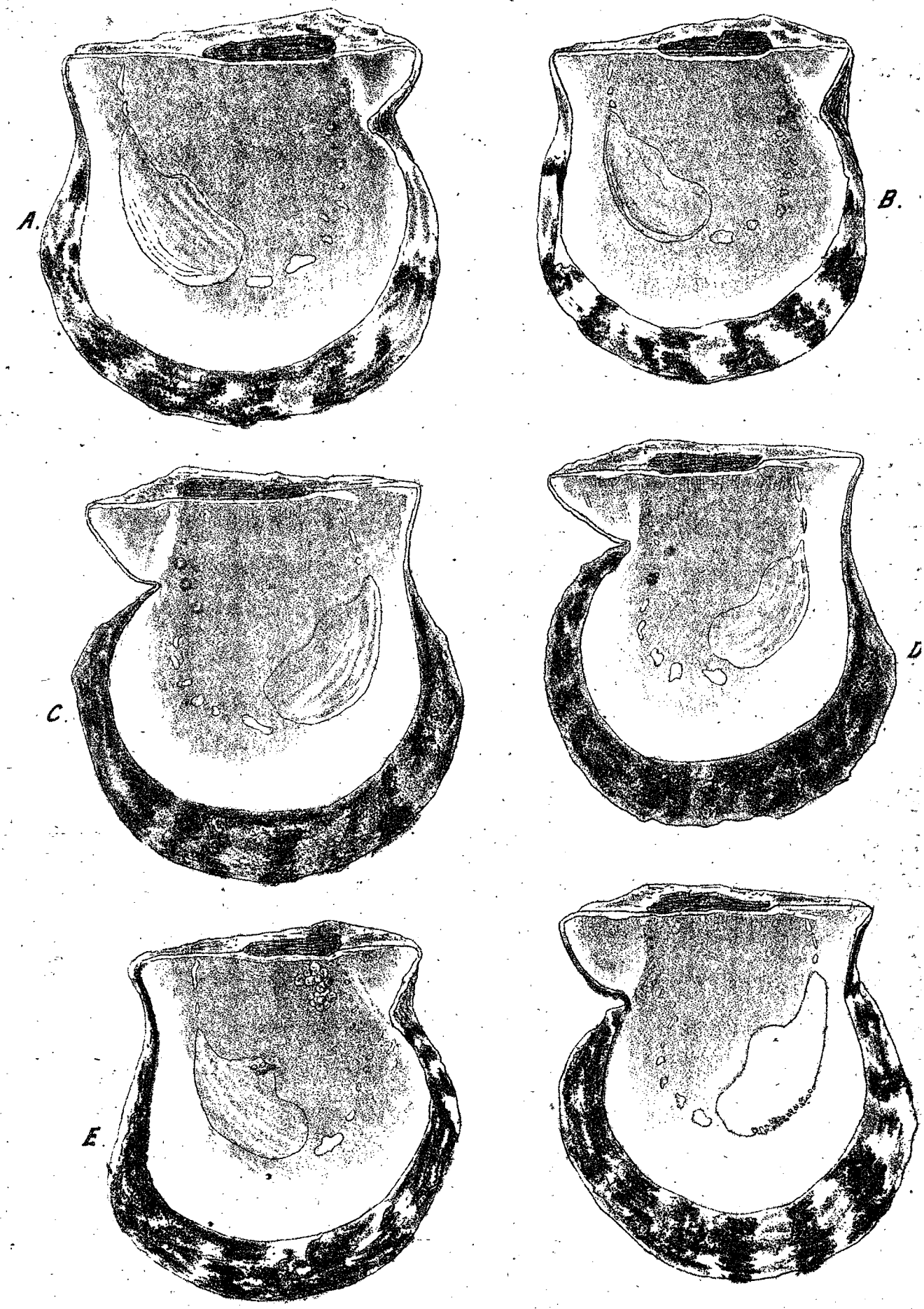
GOVERNMENT DIVERS ENGAGED IN PICKING OUT PEARLS FROM OYSTER WASHINGS.

B. C.



TWO DISSECTIONS OF PEARL OYSTERS SHOWING CYST-PEARLS *in situ*. [*Photo. by James Hornell.*

No 9.



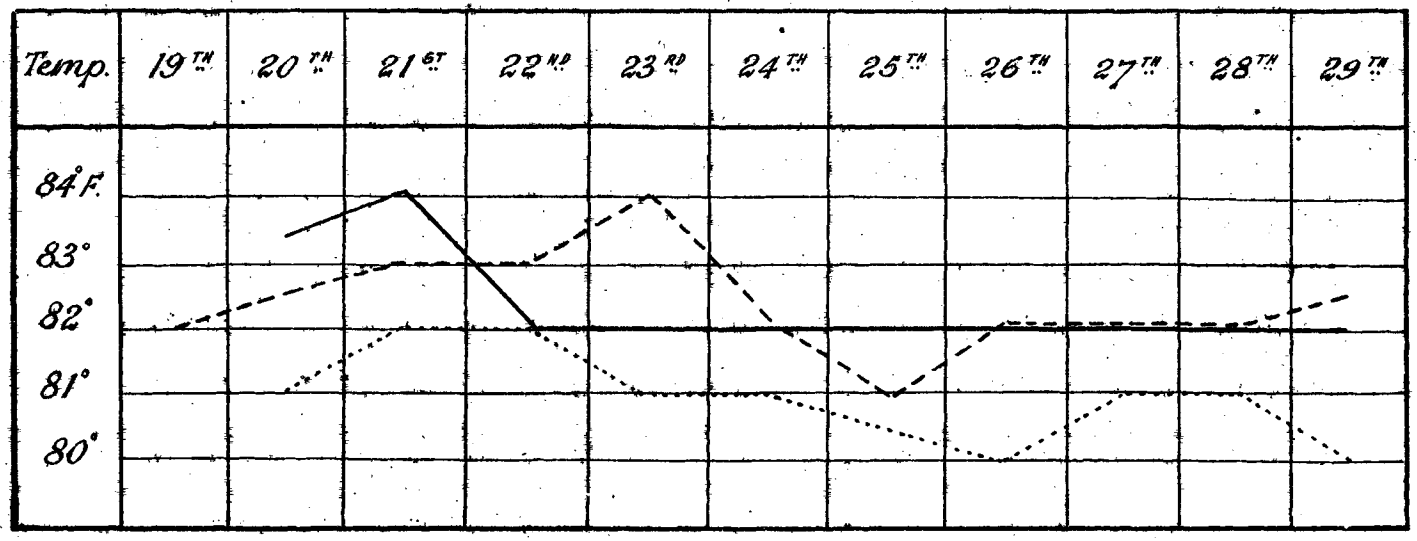
Attached Muscle-pearls.

James Hornell
30. 6. 04.

No. 10.

Ceylon Pearl Banks.

Temperature of the Sea during February 1904.



..... denotes temperature registered at 7.30 a.m.

——— " " " " noon

– – – – – " " " " 5.30 p.m.

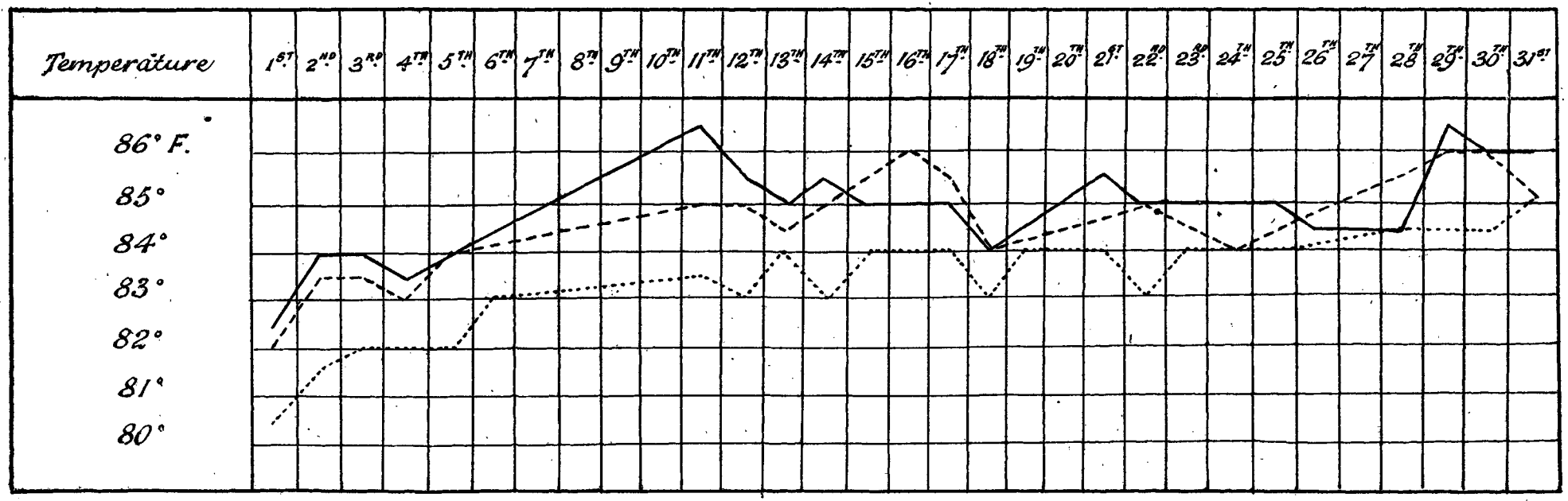
In all cases the temperature was taken at a depth of 2 feet below the Surface.

S. G. O. No. 132/04.

NO. 11.

Ceylon Pearl Banks.

Temperature of the Sea during March 1904.


Temperature
1ST 2ND 3RD 4TH 5TH 6TH 7TH 8TH 9TH 10TH 11TH 12TH 13TH 14TH 15TH 16TH 17TH 18TH 19TH 20TH 21ST 22ND 23RD 24TH 25TH 26TH 27TH 28TH 29TH 30TH 31ST
86° F.
85°
84°
83°
82°
81°
80°

..... denotes Temperature registered at 7.30 a.m.

——— " " " " noon

- - - - - - - - - " " " " 5.30 p.m.

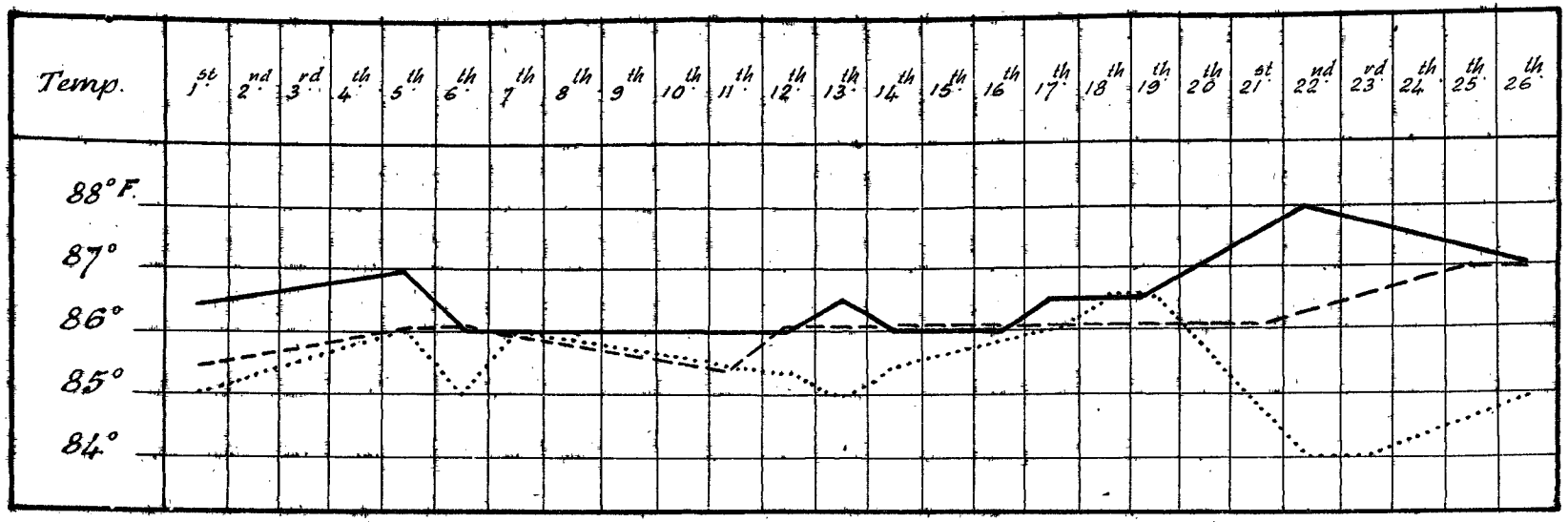
In all cases the temperature was taken at a depth of 2 feet below the surface.

S.C.O. No 133/04.

No 12.

Ceylon Pearl Banks.

Temperature of the Sea during April, 1904.



..... Denotes temperature registered at 7·30. a.m.

——— ——"——"——"——— noon

– – – – – ——"——"——"——— 5·30 p.m.

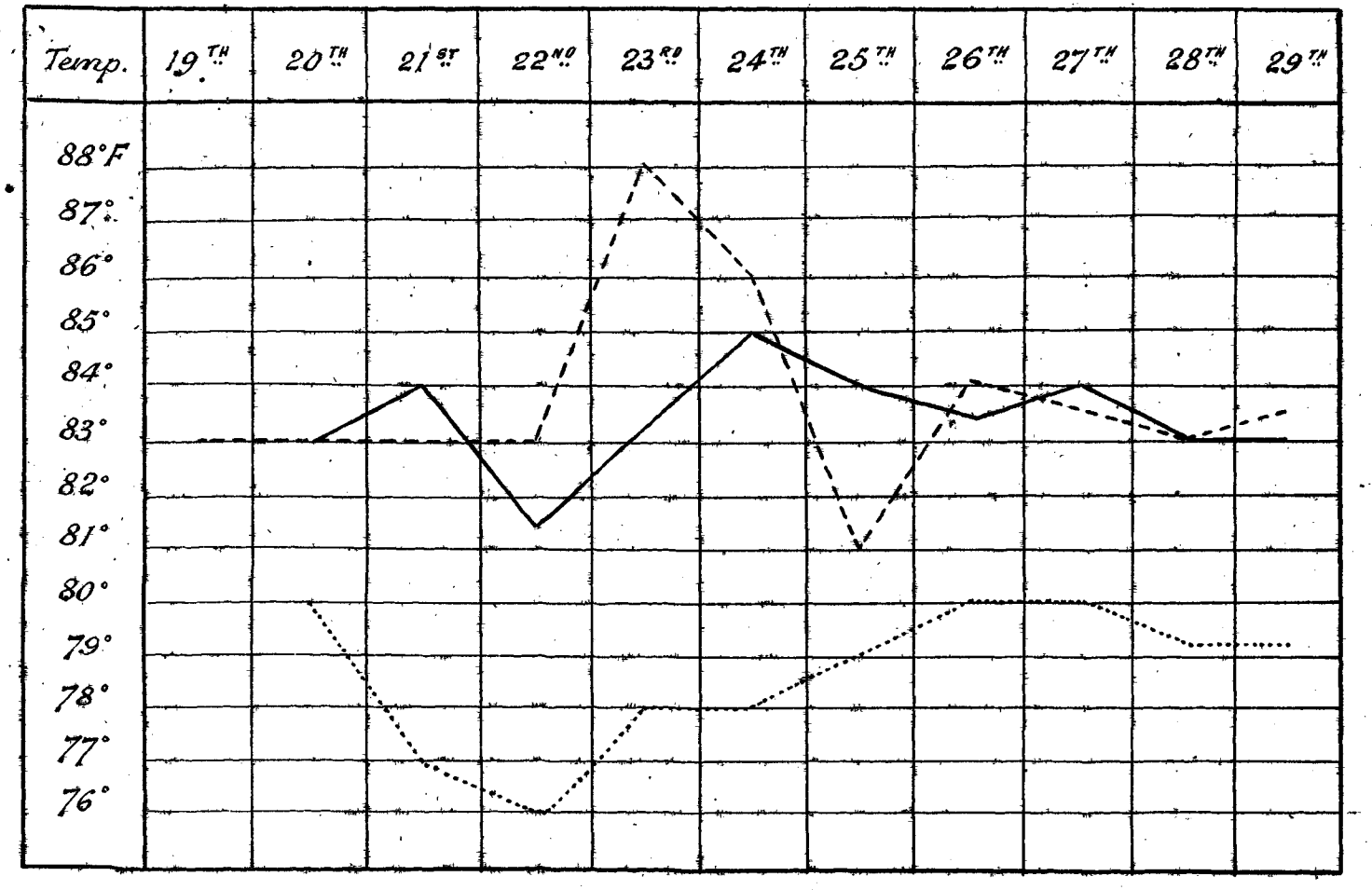
In all cases the temperature was taken at a depth of 2 feet below the surface.

S. G. O. No. 134/04.

No. 13.

Ceylon Pearl Banks.

February 1904 Temperature of Air in Shade.



..... denotes the temperature registered at 7.30 a.m.

——— " " " " " noon

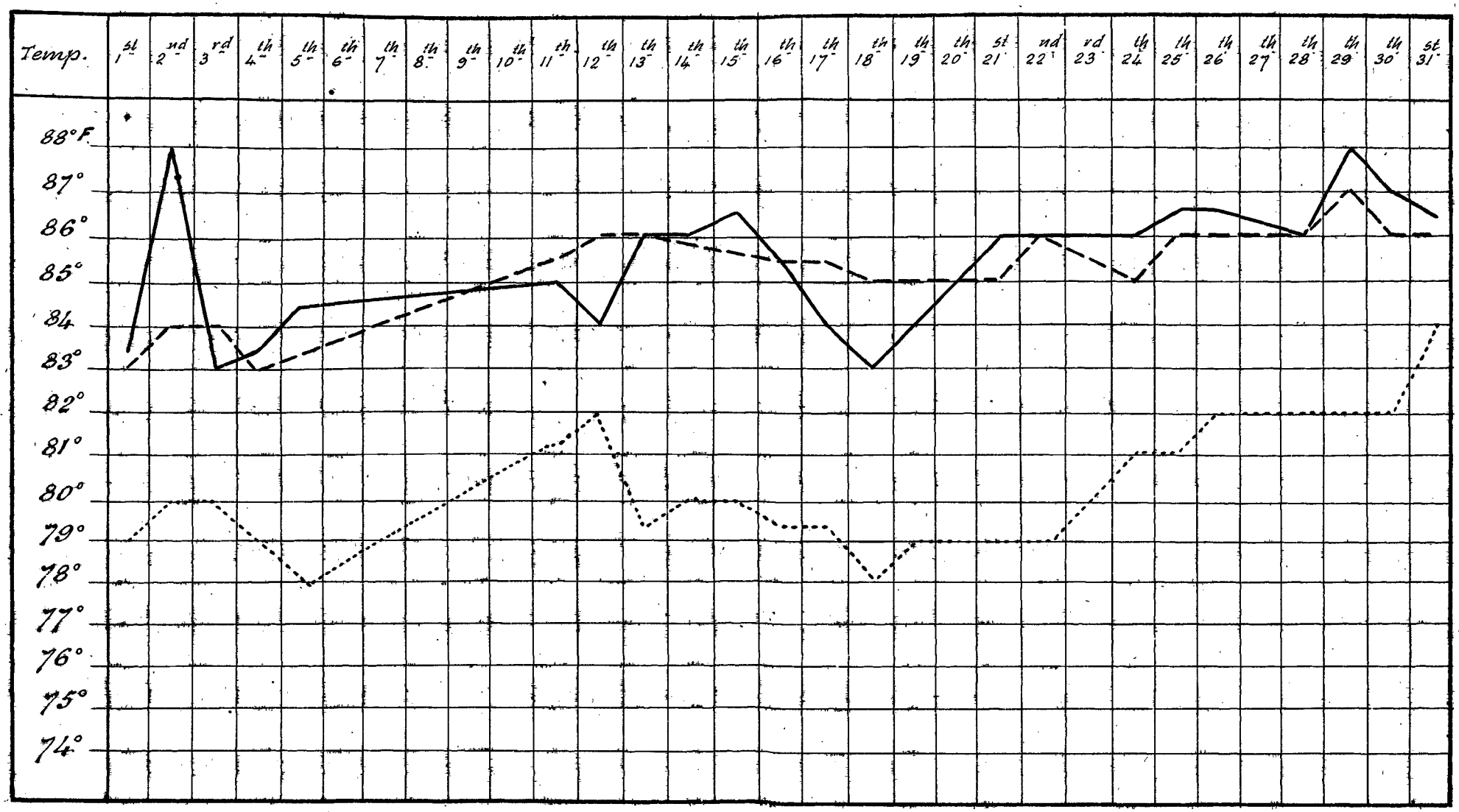
- - - - - " " " " " 5.30 p.m.

S.G.O. N 125/00

No 14.

Ceylon Pearl Banks.

Temperature of Air in Shade, March, 1904.



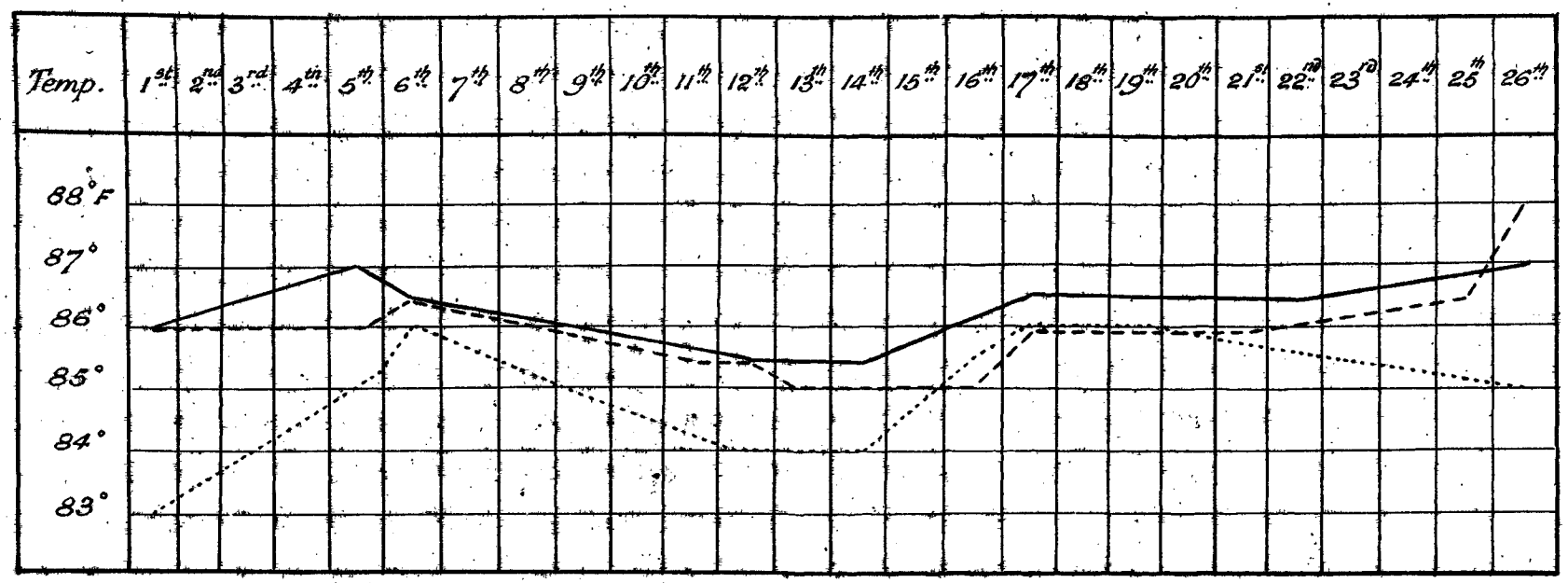
..... Denotes temperature registered at 7.30 a.m.

——— " ——— " ——— " ——— noon.

– – – – – " ——— " ——— " ——— 5-30. p.m.

Ceylon Pearl Banks.

April 1904. Temperature of Air in Shade.



..... denotes temperature registered at 7.30 a.m.

——— " " " " noon

– – – – – – – " " " " 5.30 p.m.

S.G.O. No. 137/04.

XXIV.—1904.

ADMINISTRATION REPORT

OF

THE MUNICIPAL COUNCIL OF GALLE

FOR THE YEAR

1903.

Ordered by His Excellency the Governor to be Printed.

Colombo:
PRINTED BY GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.
To be purchased at the GOVERNMENT RECORD OFFICE, COLOMBO, price 25 cents.

1904.

MUNICIPALITY OF GALLE.

REPORT OF THE CHAIRMAN FOR THE YEAR 1903.

CONSTITUTION OF COUNCIL.

AT the beginning of the year under review the Council was composed of the following members :—

Nominated Members.

Mr. H. W. Brodhurst, Chairman.
Mr. F. J. Pigott, Provincial Engineer.
Dr. W. E. Rudd, Acting Colonial Surgeon.
Mr. C. P. Hayley.
Mr. Magdon Ismail.

Elected Members.

Dr. E. Ludovici, Ward No. 1, Fort.
Mr. D. G. Goonewardene, Ward No. 2, Kaluwella.
Mr. F. Perera Abeywardene, Ward No. 3, Galupiyadda.
Mr. N. Dias Abeysinhe, Ward No. 4, Hirimbure.
Mr. F. Abeyesundera, Ward No. 5, Kumbalwella.

Dr. W. E. Rudd, Acting Colonial Surgeon, left Galle in November, and was succeeded by Dr. J. H. Ebell, Colonial Surgeon. Mr. F. J. Pigott, who was Acting Provincial Engineer, was displaced by Mr. H. A. Grant, when the latter returned from furlough.

STANDING COMMITTEES.

By Ordinance No. 7 of 1902 four Standing Committees were created, viz., (1) Standing Committee on Law and General Subjects, (2) on Markets and Sanitation, (3) Finance and Assessment, and (4) Municipal Public Works. At an election by ballot held on 10th January, the following were elected members of these Committees :—

(1) *Law and General Subjects.*
Mr. N. Dias Abeysinhe.
Mr. C. P. Hayley.
Mr. D. G. Goonewardene.

(2) *Markets and Sanitation.*
Dr. W. E. Rudd.
Dr. E. Ludovici.
Mr. D. G. Goonewardene.

(3) *Finance and Assessment.*
Mr. N. Dias Abeysinhe.
Dr. E. Ludovici.
Mr. F. J. Pigott.

(4) *Municipal Public Works.*
Mr. F. J. Pigott.
Mr. C. P. Hayley.
Mr. Magdon Ismail.

When Mr. Pigott and Dr. Rudd left Galle the vacancies caused were filled up by Mr. H. A. Grant and Dr. J. H. Ebell.

The Chairman is a Member of all Standing Committees.

MEETINGS.

There were twelve ordinary General Meetings of the Council and three Special Meetings held during the year.

The Finance and Assessment Standing Committee met four times during the year, and the Public Works Committee nine times. No meetings of the Law and Sanitation Committees were held.

A statement showing the attendance of members at the General Meetings of Council, the Special, and the Committee Meetings is given in Appendix K.

STAFF.

No changes occurred in the *personnel* of the staff. In accordance with a scheme sanctioned by the Council for granting yearly increments to the salaries of its officers, the following increases of pay were made during the year :—The Head Clerk's pay was raised from Rs. 1,400 to Rs. 1,500 ; the pay of the Second Clerk was raised from Rs. 906 to Rs. 1,000 ; the Shroff's pay was raised from Rs. 560 to Rs. 640 ; the office cooly had an increase given him of Rs. 24 ; the salary of the Superintendent of Works was raised from Rs. 2,150 to Rs. 2,500. These are the maximum salaries these officers can draw under the scheme referred to, with the exception of the shroff, who will draw the last increment to his pay in 1905.

A kangany was added to the staff of the Health Department at a salary of Rs. 180 per annum.

A market master was appointed to the Kaluwella markets on a salary of Rs. 120 per annum.

PENSIONS.

Two retired servants of the Council draw pensions, one of Rs. 833·33 and the other of Rs. 641·66 per annum. Two old servants are allowed compassionate allowances of Rs. 60 each per annum.

REVENUE.

The revenue of the year from all sources amounted to Rs. 92,886·64, being Rs. 1,233·97 in excess of the revenue of the previous year. When the balances brought forward from the previous year are added the amount available for Municipal purposes was Rs. 102,829·91.

The revenue of the year was made up as follows :—

General Revenue.

	1902. Rs. c.	1903. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Taxes ...	19,180 27	21,575 4	2,394 77	—
Tolls ...	14,873 23	13,239 77	—	1,633 46
Stamp duties and fees	20,002 22	19,431 24	—	570 98
Markets ...	11,789 55	11,584 42	—	205 13
Slaughter-house	1,323 56	1,410 89	87 33	—
Miscellaneous licenses	372 50	378 0	5 50	—
Fines ...	2,474 55	2,308 60	—	165 95
Rents ...	409 0	430 0	21 0	—
Miscellaneous	5,093 42	6,308 9	1,214 67	—
Cemeteries	257 0	830 50	573 50	—
	75,775 30	77,496 55	4,296 77	2,575 52
		Deduct Decrease ...	2,575 52	
		Nett Increase ...	1,721 25	

Assessment Revenue.

	1902. Rs. c.	1903. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Assessment tax on private property ...	11,033 6	10,623 79	—	409 87
Assessment tax on Municipal property ...	592 25	592 25	—	—
	11,625 91	11,216 4		409 87

Waterworks Revenue.

	1902. Rs. c.	1903. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Water-rate on private property ...	3,110 51	2,988 10	—	122 41
Water-rate on Government buildings ...	1,066 20	1,111 20	45 0	—
Water-rate on Municipal buildings ...	74 75	74 75	—	—
	4,251 46	4,174 5		122 41
		Deduct Increase ...		45 0
		Nett Decrease ...		77 41

Detailed accounts are given in the Appendices A, C, and D.

Notes on Revenue.

There have been increases under the following heads :—

Vehicle and Animal Tax.—Increase Rs. 2,684 due to vehicle and animal tax on hiring carriages, horses, carts, and bulls being now levied in addition to the stamp duty on the licenses The license issued in 1902 was for half a year, and was half the yearly amount.

Gintota toll sold for Rs. 261 more than in the previous year.

Sale of Intoxicating Liquors.—Increase Rs. 250. In 1903 three more licenses were issued.

Kaluwella Markets.—Increase Rs. 110·25. The fees for 1902 were from August, when the markets were first opened, to the end of the year.

Slaughter-house Licenses.—Increase Rs. 80. Two more butchers were licensed in 1903.

Sundry Receipts.—Increase Rs. 291·87 due to house rent on house in Church street acquired by the Council, sale of materials, and refund of cost of erecting a dry-earth closet.

Fees from Private Latrines.—Increase Rs. 955·64. A special collector was appointed to collect these fees.

The assessment account shows an increase of Rs. 763·72 in collection of arrears of the tax, and a decrease of Rs. 1,173·59 in the collection of taxes for the current year.

The waterworks account show likewise an increase in the collection of arrears of the water-rate, and a decrease in the collection of the rate for the current year.

Decreases occur under the following heads :—

Lighting Rate.—Decrease Rs. 163·83.

Road Tax.—Decrease Rs. 121.

Paraduwawatta and Morawak Korale Road Tolls.—Decrease Rs. 1,792·90.

Opium License.—Decrease Rs. 761.

Fish Markets.—Decrease Rs. 400.

Judicial Fines.—Decrease Rs. 162·45.

EXPENDITURE.

The expenditure of the year amounted in all to Rs. 88,115·81, being Rs. 4,906·65 less than the expenditure of 1902.

The following is an abstract of the expenditure :—

General Expenditure.

	1902. Rs. c.	1903. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Establishment	4,936 88	5,212 22	275 34	—
Pensions ...	1,584 99	1,589 99	5 0	—
Office expenses	1,117 92	1,082 60	—	35 32
Revenue services	1,639 57	1,778 6	138 49	—
Lighting ...	4,903 75	4,834 49	—	69 26
Sanitary charges	12,421 86	12,879 31	457 45	—
Health Department	9,285 31	10,046 72	761 41	—
Market charges	941 0	1,078 0	137 0	—
Slaughter-house charges	846 84	837 96	—	8 88
Miscellaneous	9,627 71	10,340 82	713 11	—
Public works	30,020 56	21,881 11	—	8,139 45
Cemeteries	869 67	798 18	—	71 49
	78,196 6	72,359 46	2,487 80	8,324 40
			Deduct Increase ...	2,487 80
			Nett Decrease ...	5,836 60

Assessment Expenditure.

	1902. Rs. c.	1903. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Police charges	9,618 84	9,814 49	195 65	—
Working charges	1,570 11	1,316 94	—	253 17
	11,188 95	11,131 43	195 65	253 17
			Deduct Increase ...	195 65
			Nett Decrease ...	57 52

Waterworks Expenditure.

	1902. Rs. c.	1903. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Balance due, Treasurer	487 1	—	—	487 1
Interest on loan	1,750 0	3,500 0	1,750 0	—
Working expenses	1,400 44	1,124 92	—	275 52
	3,637 45	4,624 92	1,750 0	762 53
			Deduct Decrease ...	762 53
			Nett Increase ...	987 47

Detailed accounts will be found in Appendices B, C, and D.

Notes on Expenditure.

The following are the more important increases :—

Establishment.—Increase Rs. 275·34 caused by the pay of the Head Clerk, the Second Clerk, the Shroff, and office cooly being raised.

Commission to Road Tax Collectors.—Increase Rs. 114·16. Commission was paid this year to the Railway Department and Police for collecting and forwarding the tax due by members of their establishments.

Commission to Latrine Fees Collector.—Increase Rs. 100·65, consequent in larger collections during the year.

Watering Streets.—Rs. 120·78 more spent in 1903.

Salaries, Health Department.—Increase Rs. 150. A kangany was appointed in 1903.

Conservancy of Public Latrines.—Increase Rs. 582·75. Three additional coolies were appointed and an extra cart employed to carry night soil to the Bataduwa Depôt.

Conservancy of Private Latrines.—Increase Rs. 190·05. A kangany and an additional cooly appointed.

Salaries of Market Masters.—Increase Rs. 120. A market master was appointed to the new markets at Kaluwella.

Time Gun.—Increase Rs. 104·19. Cost of reventing the gun, of a new sponge, and 100 friction tubes.

New Carts and Repair of Old.—Increase Rs. 455·05. In 1903 four more carts were built than in the previous year.

Interest on Loan.—Increase Rs. 1,230. Interest for two half-years was paid in 1903. In 1902 interest of one half-year only.

Salaries, Public Works.—Increase Rs. 350. Superintendent of Works' salary increased.

Improvement of Drainage, Suburbs.—Increase Rs. 925·86. Two new drains were built, one at Kaluwella through Mr. Abeysundera's land and the other on the Wakwella road.

Minor Works.—Increase Rs. 145·03. Six garden seats provided; road to Bataduwa Depôt gravelled; a new hose for the fire engine purchased.

Carriage Stand at Railway Station.—Increase Rs. 419·05. The stand was paved with wedged granite slabs.

Decreases occur under the following heads:—

Lighting Streets.—Decrease Rs. 144·20, due to a reduction in the contract for lighting.

Destroying Stray Dogs.—Decrease Rs. 114·10.

Acquisition of Land.—Decrease Rs. 759·14.

Refund.—Decrease Rs. 168·13.

Public Works.—There has been less expenditure under the following items:—Upkeep of Municipal Buildings; Improvement of Municipal Buildings; Clearing Canals; Improving Drainage, Fort; Clearing Rampart Walls; Upkeep of Windmill; Upkeep of Victoria Park; Additional Latrines; New Roads; Planting Shade Trees. To the decreases under these heads, when the non-recurrent expenditure of 1902 is added the total decrease amounts to Rs. 8,139·45.

In the assessment account there are small increases under Police Bill, Pay. of Constable Arachchies, Assessment Clerk, and Stationery, amounting in all to Rs. 242·20; and a decrease of Rs. 299·72.

In the waterworks account the increase is Rs. 1,750 paid as interest and sinking fund on loan, and Rs. 264·21 cost of repairs and incidental expenses.

Loans and Sinking Fund.

A loan of Rs. 70,000 for construction of waterworks was contracted in the years 1890 and 1892. Five per cent. for interest and sinking fund is paid on this loan. The loan is not redeemable till December 31, 1931. Payment of Rs. 11,244·33 has been made, leaving a balance of Rs. 58,755·67 due on December 31, 1903.

A loan of Rs. 41,000 for sanitary improvements was contracted in the years 1899–1901. Six per cent. for interest and sinking fund is paid on this loan. The loan is not redeemable till December 31, 1923. Sinking fund to the amount of Rs. 2,240·46 has been paid, leaving a balance of Rs. 38,759·54 still due.

Expenditure from Loans.

The loan of Rs. 70,000 was all spent on the works for a water service to the Fort. A sum of Rs. 11,495 towards this object was contributed from Municipal funds. In addition to this the interest on the loan was paid from general revenue from 1892–1897: that is, from the time the loan was contracted up to the time of the imposition of the water-rate. This amounted to Rs. 22,976·33.

The loan of Rs. 41,000 for sanitary improvement was spent mainly in opening roads and lanes in the Fort to facilitate the working of the dry-earth system in houses. The other works charged to the loan were building Pettigala-ela with stone, building retaining wall to Keppu-ela, and constructing a road on its banks, building side drains of China Garden, building Leyn Baan street sewer, and repairing sewers between Church and Lighthouse streets. (*Vide* Appendix E.)

Limit of Borrowing Power.

Under Ordinance No. 7 of 1887, section 263, the Municipal Council may, with the sanction of the Governor in Executive Council, borrow on mortgage of Municipal rates and taxes to the extent of ten times the fair average annual value received by the Council from all rates and taxes for the preceding five years. The average of the rates and taxes received from 1899 to 1903 amounts to Rs. 38,701·59; ten times this equals Rs. 387,015·90. Deducting from this the unredeemed amount of the loans already obtained, the balance Rs. 289,500 shows the limit of borrowing power of the Council on 31st December, 1903. (*Vide* Appendix G.)

Annual and Supplemental Budgets.

Provision to the extent of Rs. 74,860·85 was made in the annual budget for 1903 on general account, the chief items of which appear in page 3 and details in Appendix B.

In September a supplemental budget was passed by the Council. It made an addition of Rs. 1,815·78 to the expenditure already authorized by the annual budget, and reductions to the amount of Rs. 1,850.

The total provision made by the annual and supplemental for general purposes, assessment, and waterworks was Rs. 90,908. The expenditure fell short of that by Rs. 2,792.

In the budget for 1904, which was passed in 19th December, in addition to the ordinary recurrent votes a sum of Rs. 10,000 was set apart for one or other of the following works:—(1) extension of water supply; (2) electric lighting; (3) Town Hall.

Water Supply.

The revenue derived from the water-rate was Rs. 4,174·05 as against Rs. 4,251·46 in 1902, and the expenditure Rs. 4,624·92 as against Rs. 3,637·45 in 1902. The difference between the expenditure of the two years arises from the interest on loan being paid only for one half-year in 1902.

The estimate of revenue and expenditure is as follows:—

Revenue.

	Rs.	c.
Water-rate at 5 per cent. for four quarters	3,122	41
Water-rate on Government buildings	1,051	20
Water-rate on Municipal buildings	74	75
Fees from Trinity House	60	0
	4,308	36

Expenditure.

	Rs.	c.
Pay of oveseer and coolies	576	0
Clearing jungle	295	0
Repairs	100	0
Interest and sinking fund on loan	3,500	0
Commission to collectors	186	0
	4,657	0

Deficit, 349.

It will be apparent from this that the rate of 5 per cent. is insufficient to bear the cost of maintenance. The Council will have to take steps to bring about an adjustment of the account. This could be done either by raising the water-rate to 5½ per cent. or levying a fee on houses supplied by service pipes.

It is also deserving of consideration whether all private supplies should not be metered with the view of checking waste. The maximum amount of water allowed under the by-laws for domestic purposes is 1,000 gallons for every rupee of water-rate assessed in respect of a house. On 31st December there were fifty-eight houses supplied with house service pipes.

The reservoir filled to the level of the spill (15 ft. from lower service pipe) on 19th May, 8th July, 2nd September, and 5th November. The lowest level recorded was 10·0½ ft. on 4th May above lower service pipe. On 31st December the water level was 13 ft. 4 in. above lower service pipe.

RAINFALL.

The rainfall for 1903 was 106·76 inches, that for the previous year 124·51 inches. The rainfall in 1902 was far above the average of previous year.

The following table gives the rainfall, number of rainy days, and water level on first of each month :—

Month.	Rainfall during the Month. Inches.	Number of Rainy Days.	Water Level on 1st of each Month. Above Lower Pipe. Ft. in.	Below Level of Spill. Ft. in.
January ...	4·05	8	14 3½	0 8½
February ...	2·61	6	13 4	1 8
March ...	0·25	1	12 2	2 10
April ...	7·01	15	10 8½	4 3½
May ...	30·72	20	10 2½	4 9½
June ...	7·56	22	14 8	0 4
July ...	10·45	18	14 3½	0 8½
August ...	10·40	18	14 2	0 10
September ...	6·12	22	14 8	0 4
October ...	14·78	20	14 1	0 11
November ...	6·01	15	14 10	0 2
December ...	6·80	8	13 11	1 1
On December 31 ...	—	—	13 4	1 8
	106·76	174		

Every year during the break of the monsoons a large quantity of water is lost by the reservoir overflowing. This could be remedied by raising the parapet wall on the dam of the reservoir about a foot, which will afford better storage for the flood water which now escapes.

Water drawn from the standposts was analyzed in June by the Government Analyst, who reported that the water was clear, of good taste, and had no sediment or suspended matter. He pronounced it to be a fairly good specimen of water for drinking purposes. The Analyst's report is given in Appendix L.

PUBLIC WORKS.

Roads.—The total length of roads now vested in the Council is 27·45 miles. Of these, 19·98 miles are metalled roads and 7·47 miles gravelled. 158 lines of road were thoroughly metalled and 60·50 lines gravelled. 699 cubes of metal and 194 cubes of gravel were used in re-metalling and re-gravelling the roads and in patching. The area patched was 447¼ squares. The other works under this head included clearing drains 1,229 lines, trimming sides of roads 2,250 lines, and clearing jungle on sides of roads 336½ lines. Nothing in the way of widening narrow roads and streets or improving them was done during the year. The work mainly was that of maintenance of existing roads, which cost Rs. 9,999·24.

Bridges.—The Bope and Talapitiya bridges were put in order. Cost Rs. 563·18.

Upkeep of Municipal Buildings.—The following were repaired:—slaughter-house, meat market, fruit market, betel shed near Police Court, Talbot town bathing wells, Talbot town latrine, Seabeach latrine, Victoria Park bathing shed, sunshades to fish market, whitewashing pavilion and Municipal Office. Cost Rs. 804·07.

Improving Drainage, Fort.—Repaired cross drain of Lighthouse street, manholes to sewers, side drain in Church Cross street, renewed iron gratings to drains, cleared sewers. Costs Rs. 996·62.

Improving Drainage, Suburbs.—Built a new drain at Kaluwella passing through Mr. Abyesundera's land, improved drain near police barracks, repaired side drain of Matara road, Wakwella road, and Hirimbure road. Cost Rs. 1,609·98.

Minor Works.—Made six garden seats, provided a net and wire-netting to tennis court and a canvas hose to fire engine, filled up hollow behind District Judge's residence, repaired railing of carriage stand, cleaned town clock. Cost Rs. 519·58.

An Additional Latrine (Horbury's patent) was erected on a vacant piece of ground on the side of the new road opened between Leyn Baan street and Church street. Cost Rs. 427·93.

Carriage Stand Opposite Railway Station was paved with wedged stone at a cost of Rs. 519.

PUBLIC HEALTH.

General Health.—Good. No cases of smallpox occurred during the year. There were sixty-nine cases of chickenpox, four of measles, three of enteric fever, and two of dysentery. Whooping cough prevailed during the first quarter of the year, and influenza during the greater part of the year.

SANITATION.

Opening New Lanes in the Fort.—Land to the value of Rs. 962·37 was acquired for opening lanes to gain admission to the backs of houses with dry-earth latrines.

Acquisition of a House in the Fort.—For the improvement of the locality the Council acquired house No. 60A, Church street, standing on swampy ground, with the view of filling up the ground and widening the bordering road. The house and premises cost Rs. 4,000 and widening the street Rs. 421·89.

Working the Dry-earth System.—This was carried on on the same lines as last year. The night soil collected from the public and private latrines is conveyed to the Bataduwa Depôt, where it is buried in trenches ready cut for the purpose. A manager, two overseers, one kangany, and thirty-two coolies form the staff belonging to this Department of the Council's work. The cost of the establishment during the year was Rs. 8,644·23. Other necessary expenses, as cost of buckets, disinfectants, &c., amounted to Rs. 1,402·05.

Out of 334 houses in the Fort 237 are now worked on the dry-earth system ; 46 houses outside are similarly worked. The public latrines provided by the Council number sixteen. The Council also works six Government latrines for payment.

Collection and Disposal of Refuse.—The refuse collected in the streets and roads and from private houses is conveyed in carts and deposited in a low land at Kumbalwella belonging to a private person. The owner of the land is bound by the conditions entered into to cover the refuse daily with red earth or sand. Four scavenging carts are employed in the Fort and six outside. They make two trips a day to the place of deposit.

Offensive and dangerous Trades.—There were twenty-seven licenses issued for such trades, viz.:—coal depôt, 7 at Rs. 10 each ; lime kiln, 18 at Re. 1 each ; and bone depôt, 2 at Re. 1 each.

Bakeries.—The bakery by-laws passed in January were brought into force during the year. Notices were issued to owners of bakeries to apply for licenses. When application was made the Sanitary Officer inspected the bakeries and reported in what respect they needed improvement. The licenses were not issued until the defects pointed out by the Sanitary Officer were remedied. Up to the present time eleven bakeries have been licensed.

Dairies.—Fifty-one registered, thirty of these belong to dairymen and twenty-one to milk vendors. Five of the dairies are situated within the Fort.

PLAGUE PRECAUTIONS.

A plague patient was landed in Galle in March and taken to the southern plague hospital. He recovered and was discharged.

On a motion made by Dr. Ludovici, Member for the Fort Ward, inquiry was made of the Colonial Surgeon whether it was decided to land passengers and their luggage from plague-infected vessels at Trinity House in the heart of the town instead of sending them as before to Plague Bay, and if this is so, whether they will be landed at the ordinary landing jetty, and by what route they will be conveyed to the segregation camp. The reply of the Colonial Surgeon was that nothing had been definitely decided yet.

MARKETS.

The total gross revenue derived from the eight Municipal markets in 1903 was Rs. 11,131·75, as against Rs. 11,316·34 in 1902. The betel sheds, four in number, brought in Rs. 226·07. Licensed private markets brought in Rs. 226.

The fish market and the fish auction shed attached to it are the only markets leased out. The lease of these is sold by public auction each year. The rents of the other markets are collected monthly on licenses to stalls issued at the office, with the exception of the fruit market, the stalls of which are annually put up to competition.

SLAUGHTER HOUSE.

The number of animals slaughtered during the year was 4,869. The particulars are :—bullocks 2,263, buffaloes 242, and sheep and goats 2,364. Twenty bullocks were slaughtered under special licenses and twenty-four pigs outside the slaughter-house. The receipts amounted to Rs. 1,384·89, an increase of Rs. 79·08 over 1902's receipts. Special licenses to slaughter cattle and pigs brought in Rs. 26.

BURIAL GROUNDS.

Burial grounds are of three classes : (*a*) public burial grounds provided by the Council, (*b*) burial grounds belonging to religious denominations, and (*c*) private burial grounds licensed by the Council.

Under the first head there are two, the Dadalle General Cemetery and the Ettiligoda Cemetery. Under the second head there are eight, the Dutch Presbyterian burial ground, the Church of England burial ground, and six burial grounds attached to the Mohammedan mosques at Talapitiya, Hirimbure, Gintota, Katugoda, Ossanagoda, and Piyadigama. Under the third head there are three burial grounds all of them private burial grounds, for the use of particular families.

The number of burials during the year is given below :—

	Church of England.	Dutch Presbyterians	Wesleyans.	Roman Catholics.	Buddhists.	Hindus.	Mohammedans.	Total.
Dadalle Cemetery	1	—	16	40	135	4	—	196
Ettiligoda Cemetery	—	—	—	—	1	—	—	1
Dutch Burial Ground	3	8	2	—	—	—	—	13
Church of England Burial Ground ...	10	—	—	—	—	—	—	10
Talapitiya Mosque	—	—	—	—	—	—	158	158
Hirimbure Mosque	—	—	—	—	—	—	22	22
Gintota Mosque	—	—	—	—	—	—	6	6
Katugoda Mosque	—	—	—	—	—	—	25	25
Ossanagoda Mosque	—	—	—	—	—	—	6	6
Piyadigama Mosque	—	—	—	—	—	—	4	4
Total ...	14	8	18	40	136	4	221	441

MISCELLANEOUS.

Resignation of Council's Proctor.—Mr. J. W. L. Keegel, Proctor for the Municipal Council, retired in March from failure of health, and Mr. I. G. Keegel, his son, was appointed in his place.

Auditor.—Mr. Soertsz, who had with marked ability performed the duties of auditor for the two preceding years, was re-appointed for 1904.

Stray Dogs.—During the year there were 288 stray dogs seized. Of these, 33 dogs were redeemed by their owners, the rest were destroyed.

In the last report special mention was made of the retirement of Dr. P. D. Anthonisz, C.M.G., after many years' service on the Council. I regret to have to record in this report that Dr. Anthonisz died a few months after his retirement in June, 1903. His death was a loss to the whole community, and especially to the poor of Galle, to whom he was a generous benefactor.

H. W. BRODHURST,
Chairman.

March 8, 1904.

APPENDIX.

No. 1.—General Account.

A.—Comparative Statement of Revenue for 1902 and 1903.

	1902. Rs. c.	1903. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Balance of previous year ...	7,766 20	5,345 44	—	2,420 76
Taxes.				
Lighting rate ...	4,413 37	4,249 54	—	162 83
Vehicle and animal tax ...	2,909 0	5,593 0	2,684 0	—
Road tax, including fines ...	11,629 50	11,508 50	—	121 0
Registration of dogs ...	228 40	224 0	—	4 40
	19,180 27	21,575 4	2,684 0	289 23
Tolls.				
Paraddawatte toll ...	8,706 98	7,137 8	—	1,567 90
Morawak korale road toll...	2,915 0	2,590 0	—	225 0
Gintota toll ...	3,251 25	3,512 69	261 44	—
	14,873 23	13,239 77	261 44	1,894 90
Stamp Duties and Fees.				
Carriages for hire ...	902 50	840 75	—	61 75
Hackeries for hire ...	367 65	366 70	—	0 95
Boats	216 60	250 80	34 20	—
Carts and coaches ...	770 93	757 63	—	13 30
Butchers ...	57 0	61 75	4 75	—
Firearms	26 13	22 56	—	3 57
Sale of intoxicating liquors	2,401 60	2,660 0	258 40	—
Opium	8,360 0	7,600 0	—	760 0
Supreme Court proctors' certificates ...	85 50	99 75	14 25	—
District Court proctors' certificates ...	555 75	541 50	—	14 25
Notaries' certificates ...	95 0	85 50	—	9 50
Jinrickshas ...	38 0	38 0	—	—
Petroleum ...	222 0	202 50	—	19 50
Auctioneers and brokers ...	200 0	200 0	—	—
Taverns	5,700 0	5,700 0	—	—
Special license to slaughter cattle	3 56	3 80	0 24	—
	20,002 22	19,431 24	311 84	882 82

	1902. Rs. c.	1903. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Market Licenses.				
Fish market and fish auction shed ...	6,300 0	5,900 0	—	400 0
Meat market ...	407 50	490 0	82 50	—
Refuse meat market ...	140 0	132 50	—	7 50
Green market ...	1,943 0	1,970 25	27 25	—
Fort market ...	449 92	448 50	—	1 42
Private markets ...	238 50	226 0	—	12 50
Betel shed fees ...	234 71	226 67	—	8 4
Dewatta market ...	93 0	91 75	—	1 25
Fruit market ...	1,839 42	1,845 0	5 58	—
Kaluwella markets ...	143 50	253 75	110 25	—
	11,789 55	11,584 42	225 58	430 71
Slaughter House Licenses.				
Slaughter-house fees ...	490 0	570 0	80 0	—
Pounding and feeding cattle	815 81	814 89	—	0 92
Special license to slaughter cattle	17 75	26 0	8 25	—
	1,323 56	1,410 89	88 25	0 92
Miscellaneous Licenses.				
Grazing cattle ...	279 50	288 0	8 50	—
Offensive and dangerous trades	93 0	90 0	—	3 0
	372 50	378 0	8 50	3 0
Fines.				
Judicial fines ...	2,427 55	2,265 10	—	162 45
Fines on contractors ...	47 0	43 50	—	3 50
	2,474 55	2,308 60	—	165 95
Rents.				
Bathing wells ...	225 0	260 0	35 0	—
Pavilion	84 0	84 0	—	—
Ticket of occupancy ...	1 0	1 0	—	—
Breadfruit trees ...	27 0	13 0	—	14 0
Boutiques at bazaar ...	72 0	72 0	—	—
	409 0	430 0	35 0	14 0
Miscellaneous.				
Sale of disinfectants ...	16 24	9 32	—	6 92
Sale of carriage fare tables	21 0	50 25	—	10 75
Interest	688 40	719 83	31 43	—
Sale of chimneys and wicks	0 60	—	—	0 60
Sundry receipts ...	308 19	600 6	291 87	—
Fees for working public latrines ...	1,378 0	1,358 0	—	20 0
Fees for working private latrines ...	2,557 99	3,513 63	955 64	—
Tennis court fees ...	68 0	57 0	—	11 0
Sale of house rubbish ...	15 0	—	—	15 0
	5,093 42	6,308 9	1,278 94	64 27
Cemetery.				
Burial fees. ...	257 0	330 50	73 50	—
Transferred from deposit account ...	—	500 0	500 0	—
Total ...	83,541 50	82,841 99	4,296 77	4,996 28
Total exclusive of previous year's balance ...	75,775 30	77,496 55	—	
			Less Increase ...	4,296 77
			Nett Decrease ...	699 51

No. 1.—General Account.

B.—Comparative Statement of Expenditure for 1902 and 1903.

	1902. Rs. c.	1903. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Establishment ...	4,936 88	5,212 22	275 34	—
Pensions	1,584 99	1,589 99	5 0	—
	6,521 87	6,802 21	280 34	—
General Office Expenses.				
Stationery and cheque books	162 26	151 84	—	10 42
Printing	598 2	619 51	21 49	—
Advertisements ...	37 64	21 25	—	16 39
Audit of accounts ...	250 0	250 0	—	—
Furniture	15 0	—	—	15 0
Petty expenses ...	55 0	40 0	—	15 0
	1,117 92	1,082 60	21 49	56 81

Revenue Services.	1902. Rs. c.	1903. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Commission to road tax collectors	1,111 20	1,225 36	114 16	—
Commission to vehicle and animal tax collectors ...	38 72	48 79	10 7	—
Arresting road tax defaulters	110 0	38 50	—	71 50
Tom-tom beater ...	29 37	35 97	6 60	—
Tin plates for carts and carriages	218 58	198 26	—	20 32
Commission to latrines fees collector	124 90	225 55	100 65	—
Commission to dog tax collectors ...	6 80	5 63	—	1 17
	1,639 57	1,778 6	231 48	92 99
Lighting.				
Lighting streets within Police limits	4,066 9	3,921 81	—	144 28
Commission to lighting rate collectors ...	244 37	226 66	—	17 71
New lamps, burners, &c. ...	583 32	573 39	—	9 93
Repairs	9 97	12 21	2 24	—
Kitson light, trial of ...	—	100 42	100 42	—
	4,903 75	4,834 49	102 66	171 92
Sanitary Charges.				
Salaries	4,140 0	4,140 0	—	—
Scavenging and sweeping Fort	2,972 30	3,062 52	90 22	—
Scavenging and sweeping suburbs	3,870 0	4,140 0	270 0	—
Sweeping streets, Wards Nos. 3, 4, and 5 ...	516 0	516 0	—	—
Watering streets ...	79 22	200 0	120 78	—
Sanitary contingencies and plague precautions ...	364 34	340 79	—	23 55
Rent of house of observation and cooly ...	480 0	480 0	—	—
	12,421 86	12,879 31	481 0	23 55
Health Department.				
Salaries	1,200 0	1,350 0	150 0	—
Conservancy of public latrines	3,065 7	3,647 82	582 75	—
Conservancy of private latrines	3,156 36	3,346 41	190 5	—
Buckets	269 42	755 23	485 81	—
Disinfectants ...	410 34	359 82	—	50 52
Bataduwa Depôt watcher and cooly ...	295 0	300 0	5 0	—
Digging trenches ...	298 17	287 44	—	10 73
Aluminium carts ...	590 95	—	—	590 95
	9,285 31	10,046 72	1,413 61	652 20
Market Charges.				
Salary of market master ...	250 0	370 0	120 0	—
Rent of Fort market ...	240 0	240 0	—	—
Whitewashing markets ...	180 0	180 0	—	—
Market coolies ...	271 0	258 0	17 0	—
	941 0	1,078 0	137 0	—
Slaughter House Charges.				
Salary of slaughter-house keeper	420 0	420 0	—	—
Grass for cattle in the pound...	426 84	417 96	—	8 88
	846 84	837 96	—	8 88
Miscellaneous.				
Band	880 0	960 0	80 0	—
Fire brigade... ...	331 11	358 56	27 45	—
Inspectors' uniforms ...	60 0	60 0	—	—
Proctors' fees and stamps ...	363 0	266 93	—	96 7
Upkeep of clock tower ...	57 16	39 22	—	17 94
Destroying stray dogs ...	297 67	183 57	—	114 10
Time gun	246 25	350 44	104 19	—
Assessment tax on Municipal buildings	592 25	592 25	—	—
Water-rate on Municipal buildings	74 75	74 75	—	—
New carts and repair of old	780 14	1,235 19	455 5	—
Tools	88 55	169 83	81 28	—
Horse allowance ...	1,820 0	1,820 0	—	—
Contingencies ...	442 80	421 92	—	20 88
Acquisition of land ...	1,459 14	700 0	—	759 14
Interest on loan ...	1,230 0	2,460 0	1,230 0	—
Refund	316 29	148 16	—	168 13
Coronation address ...	88 60	—	—	88 60
Coronation celebration ...	500 0	—	—	500 0
Reception of His Excellency the Governor ...	—	500 0	500 0	—
	9,627 71	10,340 82	2,477 97	1,764 86

	1902. Rs. c.	1903. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Public Works.				
Salaries ...	2,630 0	2,980 0	350 0	—
Upkeep of roads ...	9,985 79	9,999 24	13 45	—
Upkeep of bridges ...	527 74	563 18	35 44	—
Upkeep of Municipal buildings	926 26	804 7	—	122 19
Improvement of Municipal buildings ...	1,535 0	—	—	1,535 0
Clearing canals ...	1,208 32	790 20	—	418 12
Improving drainage, Fort ...	1,510 84	996 62	—	514 22
Improving drainage, suburbs	684 12	1,609 98	925 86	—
Minor works and improvements	374 55	519 58	145 3	—
Clearing rampart walls ...	168 47	164 65	—	3 82
Windmill	185 64	150 60	—	35 4
Victoria Park ...	887 47	870 0	—	17 47
Additional latrines ...	877 70	780 93	—	96 77
New roads and improvement of old ...	580 54	249 99	—	330 55
Planting shade trees ...	436 65	183 7	—	253 58
Building a market at Kaluwella	2,994 10	—	—	2,994 10
New cattle shed ...	1,247 75	—	—	1,247 75
Carriage stand at bazaar ...	284 97	—	—	284 97
Carriage stand at railway station	99 95	519 0	419 5	—
Granite seats at Victoria Park	100 0	—	—	100 0
Sea-bathing place, Fort ...	664 47	—	—	664 47
Embankment of elas ...	386 58	—	—	386 58
Dog cart and cage ...	126 0	—	—	126 0
Renewing Miliduwa bridge	1,597 65	—	—	1,597 65
Steps to Victoria Park bathing place ...	—	100 0	100 0	—
Storeroom for disinfectants	—	600 0	600 0	—
	30,020 56	21,881 11	2,588 83	10,728 28
Cemeteries.				
Salary of cemetery keeper	803 68	780 0	—	23 68
Upkeep of cemetery ...	65 99	18 18	—	47 81
	869 67	798 18	—	71 49
Total ...	78,196 6	72,359 46	7,734 38	13,570 98
			Deduct Increase ...	7,734 38
			Nett Decrease ...	5,836 60

Assessment Account.

C.—Comparative Statement of Revenue for 1902 and 1903.

	1902. Rs. c.	1903. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Balance of previous year ...	3,546 87	3,983 83	436 96	—
Assessment tax—arrears ...	2,003 88	2,767 60	763 72	—
Assessment tax—four quarters ...	9,029 78	7,856 19	—	1,173 59
Assessment tax on Municipal buildings	592 25	592 25	—	—
	15,172 78	15,199 87	1,200 68	1,173 59
			Deduct Decrease...	1,173 59
			Nett Increase ...	27 9

Comparative Statement of Expenditure for 1902 and 1903.

	1902. Rs. c.	1903. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Police bill for second half of previous year	4,275 31	4,426 68	151 37	—
Police bill for first half of current year	4,406 76	4,424 60	17 84	—
Pay of four rural constables ...	936 77	963 21	26 44	—
Assessment clerk ...	560 0	600 0	40 0	—
Stationery and printing ...	141 1	147 56	6 55	—
Commission to collectors ...	611 8	566 74	—	44 34
House numbers	258 2	2 64	—	255 38
	11,188 95	11,231 43	242 20	299 72
			Deduct Increase ...	242 20
			Nett Decrease ...	57 52

Waterworks Account.

D.—Comparative Statement of Revenue for 1902 and 1903.

	1902. Rs. c.	1903. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Balance of previous year	—	614 0	614 0	—
Water-rate—arrears	643 27	726 87	83 60	—
Water-rate—four quarters	2,467 24	2,261 23	—	206 1
Water-rate on Government buildings	1,051 20	1,051 20	—	—
Water-rate on Municipal buildings	74 75	74 75	—	—
Fees from Trinity House	15 0	60 0	45 0	—
	4,251 46	4,788 5	742 60	206 1

Comparative Statement of Expenditure for 1902 and 1903.

	1902. Rs. c.	1903. Rs. c.	Increase. Rs. c.	Decrease. Rs. c.
Balance due, Treasurer	487 1	—	—	487 1
Pay of overseer, watcher, and coolies	574 1	576 0	1 99	—
Clearing jungle	297 27	286 67	—	10 60
Repairs and incidental expenses	371 70	107 49	—	264 21
Interest on loan	1,750 0	3,500 0	1,750 0	—
Commission to collector	157 46	154 76	—	2 70
	3,637 45	4,624 92	1,751 99	764 52

E.—Loan Account brought up to December 31, 1903.

	Rs. c.
First instalment of loan	10,000 0
Second instalment of loan	6,000 0
Third instalment of loan	5,000 0
Fourth instalment of loan	20,000 0
Refund compensation	235 0
Sale of materials	461 10
	41,696 10

	Rs. c.
Building Pettigalla-ela	3,058 1
Building retaining wall to Keppu-ela	2,705 70
Constructing a road on banks of Keppu-ela	2,994 35
Building side drains to China Garden road	1,220 71
Rebuilding drain on southern boundary of China Garden	703 40
Cost of land acquired in Fort	25,216 75
Opening new roads and alleys in Fort	1,456 90
Legal expenses	258 67
Reference case No. 6,588	536 12
Building Leyn Baan street sewer	1,494 13
Repairing sewer between Church and Lighthouse street	677 95
	40,322 69
Balance	1,373 41
	41,696 10

F.—Comparative Statement of Revenue and Expenditure, 1894–1903.

Year.	Revenue. General Account, exclusive of previous Year's Balance.	Revenue. Assessment Account, exclusive of previous Year's Balance.	Revenue. Waterworks Account, exclusive of previous Year's Balance.	Revenue. General Account, including previous Year's Balance.	Revenue. Assessment Account, including previous Year's Balance.	Revenue. Waterworks Account, including previous Year's Balance.	Expenditure. General Account.	Expenditure. Assessment Account.	Expenditure. Waterworks Account.
	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.	Rs. c.
1894	66,371 31	11,100 65	—	78,123 59	12,048 30	—	62,803 74	10,613 94	—
1895	60,691 58	10,214 38	—	76,011 43	11,648 74	—	64,560 78	11,011 37	—
1896	56,686 19	12,038 79	1,285 0	68,136 84	12,676 16	1,334 12	58,608 31	8,204 12	1,240 85
1897	58,448 2	11,666 95	1,899 17	67,976 55	16,138 99	1,948 29	66,762 62	11,542 80	1,016 27
1898	63,681 31	11,383 54	5,732 31	64,895 24	15,979 73	6,664 33	62,825 88	15,602 68	4,716 16
1899	66,916 56	11,339 10	5,606 79	68,968 92	11,716 15	7,554 96	64,160 76	10,730 20	5,032 29
1900	78,238 18	12,467 27	4,543 74	83,046 28	13,453 22	7,066 41	66,187 85	10,818 10	4,917 97
1901	67,122 53	11,852 79	4,217 42	83,980 96	14,488 51	6,365 86	76,214 76	10,941 64	6,852 88
1902	75,775 30	11,625 91	4,251 46	83,541 50	15,172 78	4,251 46	78,196 6	11,188 95	3,637 45
1903	77,496 55	11,216 4	4,174 5	82,841 99	15,199 87	4,788 5	72,359 46	11,231 43	4,624 92

G.—Limit of Borrowing Power.

Statement of Rates and Taxes, 1899–1903.

Year.	Rates.* Rs. c.	Taxes.† Rs. c.	Total. Rs. c.
1899 ...	20,800 13	17,303 65	38,103 78
1900 ...	21,761 88	18,886 53	40,648 41
1901 ...	20,574 34	17,609 13	38,183 47
1902 ...	20,290 74	17,062 58	37,353 32
1903 ...	19,639 63	19,579 38	39,219 1
	103,066 72	90,441 27	193,507 99

			Rs. c.
Average of five years, Rs. 38,701·59.			
Limit of bororwing powers Rs. 38,701·59 × 10	...	...	387,015 90
Less loan already due :—	Rs. c.	Rs. c.	
Waterworks loan account ...	70,000 0		
Less sinking fund paid ...	11,244 33		
		58,755 67	
Sanitary improvement loan account ...	41,000 0		
Less sinking fund paid ...	2,240 46		
		38,759 54	
			97,515 21
			289,500 69

H.—Particulars of Work done on Municipal Roads and Streets.

	Length of Road.	Re-metalled.	Re-gravelled.	Area patched.	Drains cleared.	Sides of roads trimmed.	Jungle cleared.	Spread and rolled Gravel.
	Miles.	Lines.	Lines.	Squares.	Lines.	Lines.	Lines.	Lines.
Fort streets ...	2·75	18·25	8	—	64	174½	—	12
Old and New Gate roads...	·75	—	—	56	—	—	—	—
Market roads ...	1·00	5·75	—	—	—	—	—	—
Hirimbure road ...	3·50	39·50	—	129	189	148	—	—
Wakwella road ...	2·00	33·00	—	56	89	172	—	—
Kumbalwella road ...	1·25	25·50	16	26	43½	98	—	—
Kandewatta road ...	·50	—	11	—	47	60	—	4
Bope road ...	2·25	—	—	27	99	182	35	5
Circular road ...	2·00	—	—	37	44	165	—	—
Havelock road ...	·23	—	—	—	—	30	—	—
Cripps road ...	·75	—	—	32	37	69	—	—
China Garden roads ...	·25	5·50	—	—	8	14	—	—
Morris road ...	2·25	19·00	—	59	80	169	43	—
Elliott road ...	·50	—	—	—	65	108	53	—
Kon tree road ...	·50	11·50	—	—	30	34	—	9
Hirimbure cross road ...	1·50	—	—	15	75	382	107	—
Dickson road ...	·75	—	—	—	40	55	—	6
Jail road ...	·50	—	—	—	—	—	—	—
Templer road ...	·25	3·00	—	—	—	—	—	—
Hume road ...	·90	—	—	—	—	—	—	—
Pettigala roads ...	·17	—	—	—	14	—	—	—
Kitulampitiya road ...	·75	—	—	—	67	94	84	4
Steel road ...	·50	—	—	—	69	54	—	5
Donald Jansz road ...	·25	—	—	—	14½	29½	14½	—
Hall road ...	·50	—	10	—	50	44	—	—
Talapitiya road ...	·50	—	12 50	—	55	70	—	—
Talbot Town road ...	·15	—	—	8	18	30	—	—
Bope cross road ...	·25	—	—	—	31	68	—	—
Rataduwa depôt ...	—	—	—	2¼	—	—	—	—
Total ...	27·45	158·00	60·50	447¼	1,229	2,250	336⅓	45

I.—Comparative Return of Collections under the Road Ordinances for 1902 and 1903.

		1902.	1903.
1.	Number of names borne on division officers' returns ...	8,553	8,568
2.	Number of persons exempted from labour... ...	87	182
3.	Number of names borne on division officers' returns less exemptions—1 less 2	8,466	8,386
4.	i. Paid commutation	7,467	7,558
	ii. Performed labour	3	4
	iii. Fined	10	3
	iv. Imprisoned	1	—
	v. Total of i., ii., iii., and iv., being number of persons who discharged their liability	7,481	7,565
5.	Percentage of 4 (v.) to 3	88·3	89·1
6.	Accounted for as died, paid elsewhere, double entries, erroneous entries, discharged, &c.	720	488
7.	Unaccounted for on last day of year	333	333

* Assessment of property, lighting rate, water-rate.

† Vehicle and animal tax :—hiring carriages, hackeries, carts, and jinrickshas, registration of dogs, road tax, tax on boats.

J.—Classified Statement of Prosecutions instituted by Municipal Inspectors in 1903.

	Municipal By-laws, Chapters IV., VII., XIV., XVII.	Ordinance No. 7 of 1887, Sections 175, 205, 206, 233, 244.	Ordinance No. 15 of 1862, Section 1 (2), (8), (12), (14), Section 4.	Ordinance No. 25 of 1901, Section 5.	Ordinance No. 8 of 1901, Section 10.	Ordinance No. 8 of 1866, Section 3.	Total.
Inspector Ward No. 1 ...	—	2	1	—	—	—	3
Do. No. 2 ...	3	5	28	4	1	3	44
Do. No. 3 ...	2	—	—	—	—	—	2
Do. No. 4 ...	—	—	—	—	1	—	1
Do. No. 5 ...	—	—	—	1	—	2	3

K.—Attendance of Councillors during 1903.

	Ordinary Meetings of Council.	Special Meetings of Council.	Finance Committee.	Public Works Committee.	Total.
Total ...	12 ...	3 ...	4 ...	9 ...	28
Mr. H. W. Brodhurst, Chairman ...	12 ...	3 ...	4 ...	9 ...	28
Mr. F. J. Pigott*	0 ...	0 ...	— ...	— ...	0
Dr. W. E. Rudd†	4 ...	2 ...	— ...	— ...	6
Mr. C. P. Hayley	8 ...	3 ...	— ...	3 ...	14
Mr. M. Ismail	11 ...	3 ...	— ...	8 ...	22
Dr. E. Ludovici	12 ...	3 ...	4 ...	— ...	19
Mr. D. G. Goonewardene ...	10 ...	3 ...	— ...	— ...	13
Mr. F. Perera Abeywardene ...	7 ...	3 ...	— ...	— ...	10
Mr. N. Dias Abeysinhe ...	6 ...	2 ...	2 ...	— ...	10
Mr. F. Abeyesundera ...	8 ...	1 ...	— ...	— ...	9
Mr. H. A. Grant‡	5 ...	2 ...	2 ...	5 ...	14
Dr. J. H. Ebell§	2 ...	0 ...	— ...	— ...	2

* Retired in March. † Retired in November, 1903. ‡ Nominated in March. § Nominated in November, 1903.
Those marked — are not Members of Committees.

L.—Report on Analysis of a Sample of Water sent to me for examination by the Secretary, Municipal Council, Galle, with his lettter No. 236 of 28th May, 1903.

Name of Sample.—Water from the standpost, Fort.

Physical Character.—Clear, good taste, no sediments or suspended matter.

Reaction	Neutral.
Free amonia	·004
Albuminoid amonia	·008
Total hardness	2
Chloride	2
Nitrites	Nil

Remarks.—Fairly good sample of water for drinking purposes.

W. SINNATAMY, M.D., F.R.C.S.,
Government Analyst.

Colombo, June 17, 1903.

M.—Municipal Staff.

Office.	Pay in 1903. Rs. c.
Secretariat.	
Secretary	972 22
Muncipal Magistrate	500 0
Chief Clerk	1,500 0
Second Clerk	1,000 0
Shroff	640 0
Peon Arachchi	180 0
Peon	150 0
Peon	150 0
Office cooly	120 0
Sanitary Department.	
Sanitary Officer	1,500 0
Inspector, Ward No. 1	480 0
Do. 2	480 0
Do. 3	540 0
Do. 4	420 0
Do. 5	600 0
Watcher, drinking wells	120 0
Health Department.	
Manager, Health Department ...	600 0
Overseer	300 0
Do.	300 0
Kangany	180 0

Office.	Pay in 1903. Rs. c.
Markets, &c.	
Market master, bazaar	250 0
Market master, Kaluwella ...	120 0
Slanghter-house keeper	420 0
Public Works.	
Superintendent of Works and Head Inspector	2,500 0
Head overseer	360 0
Keeper of clock tower	120 0
Cemetery.	
Cemetery-keeper, Dadalla... ...	360 0
Do. Ettiligoda ...	180 0
Assessment Department.	
Clerk	600 0
Waterworks.	
Overseer	360 0
Pensions.	
Jas. Ameresekere	833 33
D. A. de Silva Abeyewardene ...	641 66
A. Thomis	60 0
Babaney	60 0

Quarterly Reports of Mr. C. E. de Silva, M.B., M.R.C.S., Sanitary Officer.

For the Quarter ended 31st March, 1903.

The General Health was good. The health of the Fort residents is very much improved after the introduction of the dry-earth system. Few cases of whooping cough were reported. One case of typhoid fever occurred in Lighthouse street. The patient developed the disease about a week after arrival here from a house in Colombo, where some cases of typhoid fever had occurred. Early information was given by Dr. Ludovici, and the necessary precautions were taken. Where the dry-earth system is used early notification of cases of communicable disease is particularly essential to prevent the conveyance of infection from house to house with the changing of buckets and the neglect of disinfection of the discharges. On my report the Chairman has ordered clean buckets marked with the house number to be placed in the respective houses every night. In cases of communicable disease a special bucket should be provided to receive the excreta of patient, and the contents should be incinerated in a small incinerator. At present infected excrement mixed up with night soil is conveyed to Bataduwa and buried in the trenches there. Germs of disease may be conveyed to wells by the overflowing or percolation of contents from these trenches. The excrement of such patients treated in hospital should also be incinerated, and not taken to Bataduwa mixed up with night soil.

Sixteen cases of chickenpox were reported from Wards Nos. 2, 3, and 5.

Scavenging and Sweeping not satisfactory outside the Fort.

Markets were kept clean. The floor of the meat market is broken up here and there and requires attention.

Municipal Latrines were kept clean. The smell from the coal shed latrine about dinner time, complained of from the Oriental Hotel, was due to the emptying and cleaning of buckets on the spot at this time. Since it was ordered to remove the buckets without disturbing the contents, after putting disinfectants and sawdust and covering with well fitting lids, not earlier than 10 P.M., straight into the latrine cart, no complaint was made, except on one or two occasions, when it was found on inquiry that the coolies had resorted to the old practice of emptying and cleaning of buckets on the spot. The Manager of the Health Department and the latrine overseer were warned not to allow this again.

For the Quarter ended 30th June, 1903.

The General Health was very good. On 24th April a case of chickenpox was reported from the Fort. The patient, who came from Ambalangoda after the appearance of the eruption, was removed to the Infectious Diseases Hospital, and no one took the infection from him. On 16th June Dr. Morgan reported eight cases of chickenpox among the boarders in Richmond College. The patients were isolated in the premises. On 19th June a case of chickenpox was reported from Pettigalawatta. The patient was isolated in a hut.

Along the seabeach at Kaluwella there are open privies communicating with the sea, which washes out the contents during high tide and cause a nuisance at other times. Owing to the absence of gratings, pigs and dogs enter the privies and eat the excrement. These animals might be the means of conveying infection to houses. These pigs which grow on human excrement are slaughtered, and the flesh, which is not fit for human consumption, is sold to the public. The contamination of the seabeach and the atmosphere cannot be conducive to the health of the residents of such localities. The dry-earth system is well suited to the locality. Refuse meat is thrown about the compounds, and house drainage is altogether neglected. House refuse is thrown on the seabeach. A lane along the seabeach from the house of observation will facilitate the working of the dry-earth system, scavenging of house refuse, and improve drainage.

Scavenging and Sweeping not satisfactory outside the Fort. In Ward No. 3 the cart does not go round daily along all the roads. Only the street sweepings are scavenged in most places. In crowded localities, such as Kaluwella, Pettigala, Dangedara, Magalla, &c., refuse from houses at some distance from the road is not removed by the carts, as there are no facilities for the scavenging carts to go inside and take the refuse. In such places refuse is thrown on the seabeach or stored in gardens. Where practicable more roads and cross roads or lanes should be opened up in crowded localities for the scavenging carts to enter. Where it is not possible dust boxes should be fixed at convenient places for the deposition of house refuse, which should be daily removed by the scavenging carts at fixed hours. Those who throw refuse on the seabeach or store up refuse in gardens could reasonably be prosecuted after such provision is made for the daily scavenging of house refuse.

For the Quarter ended 30th September, 1903.

The General Health was good. Four cases of chickenpox occurred in July. As there are perhaps ten times more eating-houses and hopper boutiques than bakeries within the Municipality, I beg to suggest that the by-laws applicable to bakeries be enforced in the case of eating-houses and hopper boutiques as well. These eating-houses and hopper boutiques are worked by poor and generally sickly people, and are patronized by a large number of the poorer classes, and need the same sanitary precautions as in the case of bakeries.

Municipal Latrines were kept clean, but as a sufficient quantity of dry-earth and disinfectants are not used, the latrines smell towards evening. The seabeach latrines at Pettigala require repairs very badly.

Scavenging and Sweeping not satisfactory in Ward No. 2.

Markets were kept clean. The floor of the meat market is broken up here and there, and the floor and drains require cementing.

Drains.—The flushing of built drains was not satisfactorily attended to. Some drains are simply swept out and not flushed with water.

Bakeries.—The utensils are not kept clean enough, wooden tables cannot be kept clean, and some impermeable material should be used instead of the board.

For the Quarter ended 31st December, 1903.

Scavenging was not satisfactorily carried out in December. Towards the end of December, scavenging was very much neglected owing to a change in the contract for 1904.

Drainage.—Except the market drains, the built drains about the Bazaar, China Garden, Kaluwella, Pettigala, &c., were never flushed, but were simply swept out and the silt removed.

Water Supply.—Labuduwa water supplied for drinking was not good at times, owing to the neglect of regular washing of the barrel as ordered.

Alleys were kept clean.

Dairies were well kept, except Toussaint's in Rampart street, which created a nuisance owing to the overcrowding of cows. Toussaint was prosecuted and fined.

Bakeries were well kept, except the two at Gintota.

Market.—The meat market was not flushed regularly.

Slaughter House and Cattle Pound were kept clean.

Night Soil Depôt well kept

Latrines well kept.

General Health.—An epidemic of chickenpox was prevailing among the Goldsmith people at Minuwangoda, Kumbalwella, Kandewatta, Elliott road, &c. Forty-one cases were reported during the quarter. I got the school at Minuwangoda closed early, as the infection was carried by school children in most cases. Isolation at house is useless in these cases. Influenza was also prevailing during the quarter. Four cases of measles, two of dysentery, and two of enteric fever were reported during the quarter. The necessary precautions were taken.

CHARLES E. DE SILVA, M.B., M.R.C.S., &c.
Sanitary Officer.

RESOLUTION OF THE COUNCIL.

The foregoing Report having been submitted at a Meeting held on the 18th April, 1904, the following resolution was passed :—

"Moved by Mr. D. G. Goonewardene, seconded by Mr. M. Ismail, and carried unanimously: That the Chairman's Administration Report for 1903, which has been circulated among the Members of Council, be adopted."

J. E. ANTHONISZ,
Secretary.

The Municipal Office,
Galle, April 18, 1904.

00134736

Digitized with financial assistance from the

Government of Maharashtra

on 26 June, 2018